

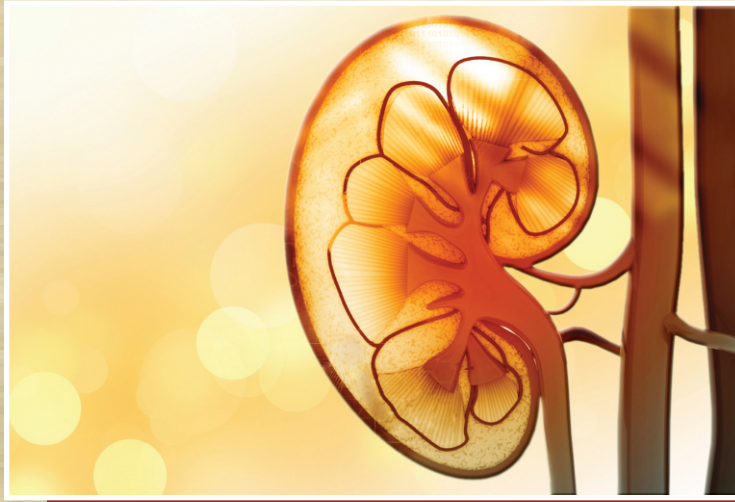
ĀRYAVĀIDYAN

A QUARTERLY JOURNAL ON AYURVEDA AND ALLIED SCIENCES

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लाभानां श्रेय आरोग्यम्
*Of all the gifts,
the most precious is health*



Vaidyaratnam P.S. Varier's
Arya Vaidya Sala, Kottakkal, Kerala

Āryavaidyan, the quarterly journal of Arya Vaidya Sala, Kottakkal, is intended to encourage scientific writing and intellectual interactions among scholars, academicians, practitioners and students of ayurveda and allied subjects.

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सतताध्ययनं, वादः परतन्त्रावलोकनम् ।
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learning other disciplines and
serving the preceptor - these factors
endow one with intelligence and memory

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Dear reader,

The science and practice of āyurveda have undergone veritable and epoch making transformations during the various phases of its evolution in the past two thousand or so years. Those changes had actually begun to set in ever since this esoteric wisdom started getting systematised into an organised and documented body of knowledge when the great Samhita of Caraka got compiled. It goes to the credit of the inherent robustness of this Indian heritage knowledge system that it has stood the test of changing times and is now proving its relevance even in the contemporary global health care scenario. What is standing out in this great churning of knowledge is the singular fact that the essentialities of classical āyurveda, in terms of its philosophical, applicational and sociological elements, have remained intact to-date. This knowledge system still offers a lot to the enthusiastic protagonists and yearning scholars for emulating and imbibing. The challenges āyurveda faced both in the distant and the recent pasts were external as well as internal. They were epistemological as well as functional. They were thrown up by the centuries long foreign hegemony as well as by the insensitive political priorities of the self ruled nation. In this historical scenario, it is refreshing to note a benign whiff of air in the country's policies and approaches which is sure to improve the destiny of this valuable heritage in the coming years.

A close observer can see that āyurveda is presently in a state of transition. The moorings of its principles and practices are deeply rooted in traditional knowledge base. At the same time, its clinical arm is extending to the contemporary world offering its benign capabilities of palliation. The inherent ability of āyurveda, in all its core components, to become contemporaneous is evident all through the history of its evolution. In the present times, it can be more clearly seen in the domains of drug manufacture, research, clinic and education.

The past five decades have seen momentous changes happening in the drug manufacturing sector of āyurveda. The dosage presentation has changed and the drug preparation process has become industrialised. The classical medicament, which is envisaged by the classical texts as a tailor-made single dose formulation, is now being manufactured in scaled up quanta with the able aid of industrial technology. And those bulk products have the status of a market commodity. Equally importantly, the user compliance of many classical formulations has significantly enhanced by the appropriate adaptation of modern forms.

In the case of clinical domain, the most important development was that a good number of Hospitals came into being in the past several decades for administering the classical pañcakarma and allied therapies. This change over from the subjective home-based modalities to hospital based objective procedures has resulted in the establishment of standard operating procedures (SOPs) for conducting each and every therapy in an organised manner. The clinical arm has also acquired the timely capability to manage some of the major ailments of the modern times.

A reference should also be made to the domain of education. The setting up of University based formal education under the Undergraduate, Postgraduate and Doctoral streams has given the practice of āyurveda a professional face. There is, however, a prevailing thought that further needs to be done for rendering āyurvedic education more need based and comprehensive.

During these periods, the regulatory environment enveloping the āyurvedic practice in its totality was also getting shaped up. Several scientific Monographs have been brought out by the Government in the past six decades providing a scientific framework for its products and practices.

One domain in which there has been some spectacular advancement in the recent past is the area of research in āyurveda. Senior scientists and leading Research Laboratories of the country have started to take a closer look at some core concepts of āyurveda with focused interest. Concerted efforts in the past more than a decade have generated important research outputs and have been got published in peer reviewed international journals of standing. These scientists also took into their fold āyurvedic experts. Varied topics like the fundamental concept of doṣaprakṛti, the unique health management modality of rasāyana, the characteristic features of mercury containing drugs, the specific bioactive attributes of medicinal plants and the physiological implications of pañcakarma, have come under the scope of this nationally important campaign. This has now been taken to the next level and has become an integral part of the Department of Science and Technology in the form of a Taskforce on Āyurvedic Biology. There are two important fallouts from these efforts. Firstly, the concepts and practices of āyurveda are being discussed at authentic global platforms through research papers, thus bringing them to the active attention of international scientists. Secondly, the āyurvedic experts have received an opportunity to be equal partners of modern researchers in this major knowledge building activity. It must also be mentioned that a lot of research projects are progressing under governmental patronage. The industry also supports projects of its specific interest.

All these developments occurring during the past several decades suggest an overall upgradation of the āyurvedic system of health care. They should serve to enhance the self esteem and confidence of āyurvedic fraternity. This tempo of modernisation should be carried forward in such a manner that āyurveda becomes fully capable of taking its due role in the global health care scenario. Enhancing the inherent strength of āyurvedic knowledge base and adding contemporary value to it through innovative research, with the active participation of favourably inclined modern researchers, will be crucial factors in such efforts. The protagonists of āyurveda should not shy away from talking to practitioners of modern science and should become ready to welcome useful inputs from parallel streams of knowledge, as exhorted by sage Suśruta.

एकं शास्त्रमधीयानो न विद्याच्छास्त्रनिश्चयम् ।

तस्माद्बहुश्रुतः शास्त्रं विजानीयाच्चिकित्सकः ॥ (सु. सू. ४-७)

It is in this context that the new incarnation of **Āryavaidyan** has a very clearly defined role to play. The newly constituted Editorial Board recognises the importance of documentation and publishing in the enhancement of knowledge. A peer reviewed scientific journal having quality standards matching with the national standards will serve a great service to genuine efforts in scientific pursuits. Arya Vaidya Sala believes that the time is opportune for a take off in the knowledge enhancement activity in āyurveda and that a journal like **Āryavaidyan** will be able to extend a supporting hand to such knowledge building efforts. The Editorial Board would like to assure the āyurvedic fraternity that **Āryavaidyan** will objectively and meticulously use its pages for supporting such efforts.

P.K. Warriar
Managing Trustee
Arya Vaidya Sala, Kottakkal



From the pages of Vāgbhāṭa - XC

Ramankutty C.

ABSTRACT: The eighth chapter of Nidānasthānam viz. Atisāragrahaṇīdānam is explained here. The aetiology, symptatology, prognosis, etc. of atisāra and grahaṇī (diarrhoea and chronic bowel disorder) are detailed in this chapter.

Key words: Atisāra, Grahaṇī

अथातोऽतीसारग्रहणीदोषनिदानं व्याख्यास्यामः ।

इति ह स्महुरात्रेयादयो महर्षयः ।

(Athātaoṣṭīsāragrahaṇīdoṣanidānam
vyākhyāsyāmaḥ ।

Iti ha smāhurātreyaḍayo maharṣayaḥ ।)

Let us discuss the chapter regarding the diagnosis of atisāra and grahaṇīdoṣa. Thus spoke the sages Ātreya, etc.

The process through which the body eliminates the undigested food or toxic substances from the body and excessive loose defecation is 'atisāra' (diarrhoea).

दोषैर्व्यस्तैः समस्तैश्च भयाच्छोकाच्च षड्विधः ।

अतीसारः.....

(Doṣairvyastaiḥ samastaiśca
bhayācchokācca ṣaḍvidhaḥ ।
Atisāraḥ.....)

There are six types of diarrhoea, viz. vātika, paittika, kaphaja, sānnipātika, bhayaja (due to fear) and śokaja (due to sorrow)

..... स सुतरां जायतेऽत्यम्बुपानतः ॥१॥

कृशशुष्कामिषासात्व्यतिलपिष्टविरूढकैः ।

मद्यरूक्षातिमात्रान्नैरशोभिः स्नेहविभ्रमात् ॥२॥

कृमिभ्यो वेगरोधाच्च तद्विधैः कुपितोऽनिलः ।

विस्रंसयत्यधोऽब्धातुं हत्वा तेनैव चानलम् ॥३॥

व्यापद्यानुशकृत्कोष्ठं पुरीषं द्रवतां नयन् ।

प्रकल्पतेऽतिसाराय.....

(..... sa sutarām jāyatetyambupānataḥ ॥ 1 ॥

Kṛśaśuṣkāmiṣāsātmya-
tilapiṣṭavirūḍhakaiḥ ।

madyarūkṣātimātrānnair-
arśobhiḥ snehavibhramāt ॥ 2 ॥

Kṛmibhyo vegarodhācca
tadvidhaiḥ kupitoṣnilaḥ ।

visramsayatyadhoṣbdhātum
hatvā tenaiva cānalam ॥ 3 ॥

Vyāpadyānuśakṛtkoṣṭham
purīṣam dravatām nayan ।
prakalpateṣṭisārāya.....)

Excessive intake of water is also a causative factor for diarrhoea. Meat of lean animals, dry meat, toxic food, oil cake of sesame, sprouted grains, alcoholism, exotic food, excessive intake of food, haemorrhoids, irregularly conducted lubricant therapy, worms, suppression of natural urges and others cause perturbation of vāta and directs watery portion of tissues downwards resulting in putting out the digestive fire and making fecal matter loose causing diarrhoea to the cavalier person.

..... लक्षणं तस्य भाविनः ॥४॥

तोदो हृद्गुदकोष्ठेषु गात्रसादो मलग्रहः ।

आध्मानमविपाकश्च.....

(..... lakṣaṇam tasya bhāvinaḥ ॥ 4 ॥

Todo hṛdgudakoṣṭheṣu
ādhmānamavipākāśca.....)

The premonitory symptoms include pricking pain in the heart region, rectum and gut, weakness,

constipation, gaseous distention and indigestion.

..... तत्र वातेन विड्जलम् ॥५॥
 अल्पाल्पं शब्दशूलाढ्यं विबद्धमुपवेश्यते ।
 रूक्षं सफेनमच्छं च ग्रथितं वा मुहुर्मुहुः ॥६॥
 तथा दग्धगुडाभासं सपिच्छापरिकर्तिकम् ।
 शुष्कास्यो भ्रष्टपायुश्च हृष्टरोमा विनिष्टनन् ॥७॥

(..... tatra vātena viṭjalam ॥ 5 ॥
 Alpālpam śabdaśūlāḍhyam
 vibaddhamupaveśyate ।
 rūkṣam saphenamachcham ca
 grathitam vā muhurmuḥ ॥ 6 ॥
 Tathā dagdhagudaābhāsam
 sapicchāparikartikam ।
 śuṣkāsyo bhraṣṭapāyusca
 hrṣṭaromā viniṣṭanan ॥ 7 ॥)

In vātātīsāra stool would be in a liquid state eliminated with slight sound, pain and straining at stools. Sometimes it can be scybalous and forthy, clear and dry and frequency of defecation would be higher. Similarly it also resembles burnt jaggery mixed with mucus with a stabbing pain. Dryness of mouth and gooseflesh are also experienced. Prolapse of rectum is also seen. The patient groans in pain.

पित्तेन पीतमसितं हरिद्रं शाद्वलप्रभम् ।
 सरक्तमतिदुर्गन्धं तृणमूर्च्छास्वेदाहवान् ॥८॥
 सशूलं पायुसन्तापपाकवान्.....

(Pittena pītamasitam
 hāridram śādvālaprabham ।
 saraktamatidurgandham
 tṛṇmūrccḥāsvedadāhavān ॥ 8 ॥
 Saśūlam pāyusantāpapākavān.....)

In the case of pittātīsāra, the stool is yellow, black, deep yellow and green as grass in colour and is eliminated with blood and is foul smelling. Morbid thirst, swooning, perspiration, burning sensation and colic are commonly seen. There would be burning sensation and sores are seen in the rectum.

..... श्लेष्मणा घनम् ।
 पिच्छलं तन्तुमच्छ्वेतं स्निग्धमामं कफान्वितम् ॥९॥
 अभीक्षणं गुरु दुर्गन्धं विबद्धमनुबद्धरुक् ।
 निद्रालुरलसोऽन्नद्विडल्पाल्पं सप्रवाहिकम् ॥१०॥

सरमोमहर्षः सोत्वच्छेशो गुरुवस्तिगुदोदरः ।
 कृतेऽप्यकृतसंज्ञश्च.....
 (..... śleṣmaṇā ghanam ।
 picchilam tantumacchvetam
 snigdhamām kaphānvitam ॥ 9 ॥
 Abhīkṣṇam guru durgandham
 vibaddhamanubaddharuk ।
 nidrāluralasoऽnnadviḍ-
 alpālpam sapravāhikam ॥ 10 ॥
 Saromaharṣaḥ sotkṣeśo
 guruvastigudodaraḥ ।
 kṛteऽpyakṛtasañjaśca)

In kaphātīsāra, the stool is greasy, mucoid and are seen with thread-like kapha. It is white, sloppy, undigested, foul-smelling with mucus and accompanied with straining of stools. This is followed by pain, sleep, drowsiness, aversion of food and gooseflesh. Displacement of doṣas are also seen. There will be heaviness in the bladder region, rectum and abdomen. The defecation would be unsatisfactory.

..... सर्वात्मा सर्वलक्षणः ॥११॥
 (..... sarvātmā sarvalakṣaṇaḥ ॥ 11 ॥)

In sannipātātīsāra, all the symptoms mentioned earlier for each doṣa would be seen.

भयेन क्षोभिते चित्ते सपित्तो द्रावयेच्छकृत् ।
 वायुस्ततोऽतिसार्येत क्षिप्रमुष्णं द्रवं प्लवम् ॥१२॥
 वातपित्तसमं लिङ्गैराहुः.....

(Bhayena kṣobhite citte
 sapitto drāvayecchakṛt ।
 vāyustatoऽtisāryeta
 kṣipramuṣṇam dravam pḷavam ॥ 12 ॥
 Vātapittasamam liṅgairāhuḥ)

When one is frightened, the vāta and pitta are perturbed. This liquefies the faeces. Warm, watery stools are eliminated and are seen floating. This resembles the vātapittātīsāra.

..... तद्वच्च शोकतः ।
 (..... tadvacca śokataḥ ।)

Diarrhoea due to grief would be similar in nature.

अतीसारः समासेन द्विधा सामो निरामकः ॥१३॥

सासृङ्गिनरस्रः.....

(atīśāraḥ samāseṇa

dvidhā sāmo nirāmakaḥ ॥ 13 ॥

Sāsṛṅginrasraḥ)

Another classification of diarrhoea is known as 'sāmātīśāra' and 'nirāmātīśāra'. In certain cases, the faecal matter is mixed blood. So it is classified in 'saraktātīśāra' and without blood it is 'araktātīśāra'.

..... तत्राद्ये गौरवादप्सु मज्जति ।

शकृद्गुन्धमाटोपविष्टम्भार्तिप्रसेकिनः ॥१४॥

(..... tatrādye gauravādapsu majjati ।

śakṛddurgandhamāṭopa-

viṣṭambhārtiprasekinaḥ ॥ 14 ॥)

In sāmātīśāra the faeces are heavy and would sink in water, foul smelling, noisy bowel sound, gurgling in abdomen, stomach-ache and emission of kapha are some of the common symptoms.

विपरीतो निरामस्तु.....

(Viparīto nirāmastu)

In nirāmātīśāra or pakvātīśāra, the symptoms are of opposite nature.

..... कफात्पक्वोऽपि मज्जति ।

(..... kaphātpakvoऽpi majjati ॥)

When kaphātīśāra becomes pakvātīśāra, the stool sinks.

अतीसारेषु यो नातियत्नवान् ग्रहणीगदः ॥१५॥

तस्य स्यादग्निविध्वंसकरैरन्यस्य सेवितैः ।

(atīśāreṣu yo nāti-

yatnavān grahaṇīgadaḥ ॥ 15 ॥

Tasya syādagnividhvamsa-

karairanyasya sevitaiḥ ।)

Those who ignore the aforementioned symptoms and those who consume exotic food that weakens the digestive fire are prone to 'grahaṇi' (a chronic bowel disorder).

सामं शकृन्निरामं वा जीर्णे येनातिसार्यते ॥१६॥

सोऽतिसारोऽतिसरणादाशुकारी स्वभावतः ।

(sāmam śakṛnnirāmam vā

jīrṇe yenātisāryate ॥ 16 ॥

Soऽtisāroऽtisaraṇād-

āsukārī svabhāvataḥ ।)

If the āma or pakva is eliminated after digestion period, frequently in a liquid state, we can say that the person is suffering from atīśāra. This situation if not treated early would turn grave. So immediate attention is called for.

सामं सान्नमजीर्णेऽन्ने जीर्णे पक्वं तु नैव वा ॥१७॥

अकस्माद्वा मुहुर्बद्धमकस्माच्छिथिलं मुहुः ।

चिरकृद्ग्रहणीदोषः सञ्चयाच्चोपवेशयेत् ॥१८॥

(sāmam sānnamajīrṇeऽnne

jīrṇe pakvam tu naiva vā ॥ 17 ॥

Akasmādvā muhurbaddha-

makasmācchithilam muhuḥ ।

Cirakṛdgrahaṇīdoṣaḥ

sañcayāccopaveśayet ॥ 18 ॥)

The frequent defecation before or after digestion, along with digested or undigested food loose or hard is known as chronic bowel disorder.

स चतुर्धा पृथग्दोषैः सन्निपाताच्च जायते ।

(Sa caturdhā pṛthagdoṣaiḥ

sannipātācca jāyate ।)

There are four types, viz. vātaja, pittaja, kaphaja and sānnipātika.

प्राग्रूपं तस्य सदनं चिरात्पचनमम्लकः ॥१९॥

प्रसेको वक्त्रवैरस्यमरुचिस्तृट् क्लमो भ्रमः ।

आनद्धोदरता छर्दिः कर्णक्ष्वेडोऽन्त्रकूजनम् ॥२०॥

(prāgrūpam tasya sadanam

cirātpacanamamḷakaḥ ॥ 19 ॥

Praseko vaktravairasya-

marucistrṭṭ kḷamo bhramaḥ ।

ānaddhodaratā chardiḥ

karṇakṣveḍoऽntrakūjanam ॥ 20 ॥)

The premonitory signs are weakness, poor digestion, pyrosis, salivation, dryness in the mouth, loss of appetite, thirst, fatigue, swooning, distension of abdomen, vomiting, ringing in the ears and roaring in the bowel.

सामान्यं लक्षणं कार्श्यं धूमकस्तमको ज्वरः ।

मूर्च्छा शिरोरुग्विष्टम्भः श्वयथुः करपादयोः ॥२१॥

(Sāmānyam lakṣaṇam kārsyam
dhūmakastamako jvaraḥ ।
mūrcchā śīrorugviṣṭambhaḥ
śvayathuḥ karapādayoḥ ॥ 21 ॥)

Common symptoms of grahaṇī are emaciation, heart-burn, diminished vision, fever, unconsciousness, head-ache, gurgling sound in the abdomen and swelling of the hands and feet.

तत्रानिलान्तालुशोषस्तिमिरं कर्णयोः स्वनः ।
पार्श्वोरुवङ्क्षणग्रीवारुजाऽभीक्षणं विषूचिका ॥२२॥
रसेषु गृद्धिः सर्वेषु क्षुत्तृष्णा परिकर्तिका ।
जीर्णं जीर्यति चाध्मानं भुक्ते स्वास्थ्यं समश्नुते ॥२३॥
वातहृद्रोगगुल्मार्शः प्लीहपाण्डुत्वशङ्कितः ।
चिराद्दुःखं द्रवं शुष्कं तन्वामं शब्दफेनवत् ॥२४॥
पुनः पुनः सृजेद्वर्चः पायुरुक्त्वासकासवान् ।

(Tatrānilāttāluśoṣa-
stimiram karṇayoḥ svanaḥ ।
pārśvoruvaṅkṣaṇagrīvā-
rujāṣbhīkṣṇam viṣūcikā ॥ 22 ॥
Raseṣu gṛddhiḥ sarveṣu
kṣuttrṣṇā parikartikā ।
jīrṇe jīryati cādhmānam
bhukte svāsthyam samaśnute ॥ 23 ॥
Vātaḥṛdrogagulmārśaḥ-
plīhapāṇḍutvaśāṅkitaḥ ।
cirāddukham dravam śuṣkam
tanvāmam śabdaphenavat ॥ 24 ॥
Punaḥ punaḥ sṛjedvarcaḥ
pāyurukśvāsakāsavān ।)

In vātaka, dryness of palate, diminished vision, ringing in the ears, pain in the sides, thigh, scrotal region and neck. This extreme pain resembles that of 'viṣūcika' (cholera), craving for all tastes, increased hunger and thirst; sharp pain in the rectum, flatulence during digestion and after digestion; comfortable immediately after taking food; vātikahṛdroga, vātikagulma, vātārśas, plīhodara, pāṇḍu are some of the common misdiagnostic symptoms. One passes stools with difficulty after long intervals, faeces may be liquid, non-greasy, thin, undigested, frothy, defecation painful and may increase in frequency with shortness of breath, pain in the rectum and cough.

पित्तेन नीलपीताभं पीताभः सृजति द्रवम् ॥२५॥
पूत्यम्बोद्गारहृत्कण्ठदाहारुचित्दर्दितः ।

(pittena nīlapītābham
pītābhaḥ sṛjati dravam ॥ 25 ॥
Pūtyam|odgārahṛtkanṭha-
dāhārucitrḍarditaḥ ।)

In paittika, the faecal matter would be bluish-yellow in colour and liquid in nature. The body would turn yellow, sour and foul-smelling belching, burning sensation in heart region and throat, loss of appetite and morbid thirst are seen.

श्लेष्मणा पच्यते दुःखमन्नं छर्दिररोचकः ॥२६॥
आस्योपदेहनिष्ठीवकासहल्लासपीनसाः ।
हृदयं मन्यते स्त्यानमुदरं स्तिमितं गुरु ॥२७॥
उद्गारो दुष्टमधुरः सदनं स्त्रीष्वहर्षणम् ।
भिन्नामश्लेष्मसंसृष्टगुरुवर्चःप्रवर्तनम् ॥२८॥
अकृशस्यापि दौर्बल्यम्.....

(śleṣmaṇā pacyate duḥkha-
mannam chardirarocakaḥ ॥ 26 ॥
Āsyopadehaniṣṭhīva-
kāsaḥḥllāsapīnasāḥ ।
hṛdayam manyate styāna-
mudaram stimitam guru ॥ 27 ॥
Udgāro duṣṭamadhuraḥ
sadanam strīṣvahaṛṣaṇam ।
bhinnāmaśleṣmasamsṛṣṭa-
gurubarcaḥpravartanam ॥ 28 ॥
Akṛśasyāpi daurbalyam.....)

In kaphaja, the digestion is very weak. Vomiting, lack of appetite, whitish coating of tongue, spitting, cough, discomfort in the chest, nasal congestion, heaviness in the heart, heaviness and stiffness in the abdomen, sweet but foul-smelling belching, weakness, lack of sexual desire, faeces liquid in form, undigested, mixed with mucus, heavy and large in quantity. Though not emaciated, the body tends to be weak.

..... सर्वजे सर्वसङ्करः ।

(.....sarvaje sarvasaṅkaraḥ ।)

In sannipātaja all the afore mentioned symptoms are seen.

विभागेऽङ्गस्य ये चोक्ता विषमाद्यास्त्रयोऽग्नयः ॥२९॥

तेऽपि स्युर्ग्रहणीदोषाः.....

(vibhāgeṣṅgasya ye caktā
viṣamadyāstrayoṣgnayaḥ ॥ 29 ॥

Teṣpi syurgrahaṇīdoṣāḥ.....)

The viṣamāgni, mandāgni and tīkṣṇāgni mentioned in the 'Aṅgavibhāgādhyāya', if ignored would result in grahaṇi.

..... समस्तु स्वास्थ्यकारणम् ।

(..... samastu svāsthyakāraṇam ।)

Samāgni is the health or the equilibrium in agni.

वातव्याध्यश्मरीकुष्ठमेहोदरभगन्दराः ।

अर्शांसि ग्रहणीत्यष्टौ महारोगाः सुदुस्तराः ॥३०॥

(Vātavyādhyasmarīkuṣṭha-
mehodarabhagandarāḥ ।

arśānsi grahaṇītyaṣṭau
mahārogāḥ sudustarāḥ ॥ 30 ॥)

Grahaṇī is regarded as one among eight major

diseases. The other diseases are vāta disorders, urinary calculus, leprosy, diabetes mellitus, ascitis, fistula-in-ano and haemorrhoids. All these are very difficult to treat.

इति श्रीवैद्यपतिसिंहगुप्तसूनुश्रीमद्वाग्भटविरचिताया-
मष्टाङ्गहृदयसंहितायां तृतीये निदानस्थानेऽतीसारग्रहणीदोष
निदानं नामाष्टमोऽध्यायः ॥८॥

(Iti śrīvaidyapatisimhaguptasūnuśrīmadvābhṭa-
viracitāyāmaṣṭāṅgahṛdayasamhitāyām tritīye
nidānasthāneṣṭīsāragrahaṇidoṣa nidānam nāma
aṣṭamoṣdhyāyaḥ ॥ 8 ॥)

Thus ends the 8th chapter named Atīsāragrahaṇi-
doṣa nidānam of Aṣṭāṅgahṛdayam composed by
Śrīmad Vāgbhaṭa, the son of Śrīvaidyapati
Simhagupta.

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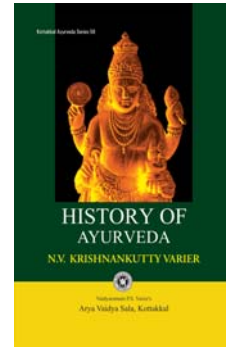
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Correlation of a gut therapy protocol (āmacikitsa) in changes of āma and behavioral symptoms of autistic children

Dinesh K.S., Jayadevan C.V., George M.J. and Anitha Patil

ABSTRACT: Āma (toxic byproduct of errant digestion or metabolism) as the root cause of all diseases characterized by diarrhoea, constipation, vomiting, abdominal pain, fever, etc. is a unique concept of āyurveda. The clinical features of āma are commonly observed in autistic children and this may be attributed to the fact that both the mind and gut functions are governed by a single physiological entity rasadhātu (the initial dhātu produced after digestion). The relation between gut problems and behavioral disorders in autistic children has been discussed since long. A retrospective analysis of the records of 20 autistic children who had undergone intervention at Āyurvedic Center for Autism and Learning disability Management (AyuCALM), Department of Kaumārabr̥tya of VPSV-AVC, Kottakkal, India, was performed. Intervention included an āyurvedic gut therapy protocol (AGTP) consisting of oral administration of polyherbal compound drugs and dietetics. The changes observed in gut symptoms and behavioral symptoms before and after AGTP were recorded and analysed for possible correlations. Significant change was observed in most of the gut symptoms (abdominal pain <0.001, bloating, constipation and lack of appetite <0.05) and in few behavioral symptoms (stereotypy and crankiness <0.05), with a positive correlation coefficient. Hence, it is inferred that in autism, āma is present in both gut and metabolic level and the behavioral symptoms have a conspicuous relation with āma. The AGTP used in the current study aids alleviation of both āma and behavioral symptoms in autistic children.

Key words: Autism, Āma, Gut, AyuCALM, AGTP.

Autism is the most prevalent of a subset of disorders organized under the umbrella of pervasive developmental disorders and one in 150 children is diagnosed with autism spectrum disorder before reaching age four.^{1,2} It is characterized by social deficit, abnormalities in communication, repetitive behaviors and cognitive inflexibility.³ Today it is a matter of controversy that the connection between the gut and autism is a reality or a myth. Despite literature including publication of Andrew Wakefield's paper in Lancet,⁴⁻⁶ many critics continue to deny this connection. It is also true that precise empirical data to support the theory that autistic children have more or different GI symptoms than usual is lacking.⁷ Āyurveda indicates the role of gut in health and disease.⁸ It is interesting to note that

certain clinical features are indicative of the presence of āma and can be mapped in diseases including autism. The reasons of occurrence of āma in autistic children are due to errant metabolism owing to: dysbiosis,⁹ yeast growth,¹⁰ nutritional deficiency,¹¹ enzyme deficiency,¹² essential fatty acid deficiency,¹³ gastro-esophageal reflux disease,¹⁴ indigestion,¹⁵ inflammatory bowel,¹⁶ chronic constipation¹⁵ and their cascades, etc. Leaky gut syndrome¹⁷ is the most discussed pathogenesis among them. Alternating bowel habits of constipation and diarrhea are also common among autistic children. Abdominal pain is the chief subjective complaint due to which most autistic children demonstrate tantrums or irritability in their spectrum of disease presentation.¹⁸

The concept of āma in āyurveda is equivalent to

a functional defect in the bio-transformation of biological matter resulting in the accumulation of unwanted products resulting in several cascades of ill-health.^{19a} This is well explained in connection with digestive physiology by different āyurveda scholars. Āma can produce symptoms like abdominal pain (śūla), diarrhoea (atisāra), bloating (anāha), constipation (vibandha), lack of appetite (aruci) and increased tiredness (sādam).²⁰ If the very same āma is present at a systemic level, it is referred to as dhātugata āma (āma at systemic level).

It is hypothesized that āma symptoms are more or less similar to the symptoms of gut problems in autistic children and that both koṣṭhagata (gut related) and dhātugata (systemic) āma symptoms are present in autistic children. The current study aimed to retrospectively evaluate the presence of āma symptoms in autistic children and the effect of an āyurvedic gut treatment protocol (AGTP) on these symptoms.

Materials and methods

The case records of autistic patients (n=20) admitted for routine treatment in Āyurvedic Centre for Autism and Learning Disability Management (AyuCALM), a functional subset of Department of Kaumarabhritya, Vaidyaratnam P.S. Varier Ayurveda College Hospital, Kottakkal from September 2011 to 2013 were selected for collecting the requisite data. All patients were diagnosed as autistic either by clinical psychologists/paediatricians/neurologists from

different Institutions as per DSM-IV criteria.²¹ Patients of Rett syndrome and childhood disintegrative disorder were excluded from this analysis. All patients were screened for serum ammonia, serum lactate and serum pyruvate (considered as indicators of āma at metabolic level - dhātugata āma), a part of the autism treatment and investigation programme of the Hospital. According to the programme, all autistic children were treated by the āyurvedic gut therapy protocol (AGTP) for at least three months initially.

Assessment regarding the presence of āma and the behavioral symptoms was done before and after the AGTP. The details of AGTP medicines are shown in Tables 1 & 2. All the patients were advised to follow a general guideline for the diet and activity prepared on the basis of āma genesis either at gut level or metabolic level (Table 3). The behavioral symptoms assessed were: sensory dysfunction, stereotypy, crankiness, spontaneous cry and disordered sleep pattern. Abdominal pain, diarrhoea, bloating, constipation, lack of appetite, increased tiredness were the symptoms assessed for āma. Both, the behavioral symptoms and āma symptoms were graded on an arbitrary score. Behavioral problems were assessed not as per any standard guidelines. All the behavioral features were graded as: 0 - no problem; 1 - mild; 2 - moderate; 3 - severe; and 4 - very severe. The gradations of symptoms are shown in Table 4. The statistical analysis was done by the InStat (Graph pad software) programme for student 't' test and correlation studies.

TABLE 1
Details of AGTP medicines

Condition	Prescription / Reference
1 Nausea, headache, food sensitivity, any respiratory problems, increased tiredness	Citrakādi kvātha [Ingredients of Śaddharaṇacūrṇa - Su. Ci. 4] (SNA), Vilvādi guḷika [S.Y.] (AVS), Amṛtāriṣṭa [B.R.](AVS)
2 Diarrhoea, abdominal cramps, bloating, increased tiredness, evidence of abdominal pain, food-sensitivity	Kaiḍaryādi kvātha [AVS], Vilvādi guḷika [AVS], Mustāriṣṭa [B.R. - AVS]
3 Food-sensitivity, increased tiredness, evidence of any of dhātugata āma	Amṛtottaram kvātham [Nāgarādi kvātha (S.Y.) AVS] Vilvādi guḷika, Amṛtāriṣṭa

SNA - SNA Oushadhashala Pvt. Ltd, Kerala; AVS - Arya Vaidya Sala, Kottakkal; S.Y. - Sahasrayogam

Name of the drug	Family	Part used
1. Kaidarya (<i>Murraya koenigii</i>)	Rutaceae	Leaf
2. Haritaki (<i>Terminalia chebula</i>)	Combretaceae	Fruit
3. Nāgara (<i>Zingiber officinale</i>)	Zingiberaceae	Rhizome
4. Paṭola (<i>Tricosanthes dioica</i>)	Cucurbitaceae	Fruit

Results

Of behavioral issues, stereotypy and crankiness reduced significantly ($p < 0.05$) whereas changes in sensory dysfunction, spontaneous cry and disordered sleep were not significant ($p > 0.05$). Highly significant reduction was observed in abdominal pain ($p < 0.001$) following the AGTP. Significant changes were also observed in bloating, constipation and lack of appetite ($p < 0.05$). The changes in the behavioral problems and āma symptoms showed a positive correlation (+0.898). The effect of AGTP in behavioural and gut symptoms is shown in Table 5 (Fig. I - III).

Discussion

Most of the diseases which are originating endogenously are caused by āma;^{19b} autism is not an exception in this general rule. Āma can occur at two levels, at GIT or at metabolic (dhātu) level. In autism symptoms, both GIT and dhātugata āma are available. Nevertheless, the rasadhātu

(initial substratum for the body metabolism produced immediately after the process of digestion) is the chief one which governs the functions of mind.^{22a} Healthy formation of rasadhātu gives rise to healthy status of mind. According to different literatures, it can be seen that PDD-NOS is the most prevalent type²³ of autistic behavior; the same was observed in the current study too. Ammonia and lactate are the biochemicals in the metabolism of carbohydrates whereas pyruvate is of protein metabolism. These biochemical mechanisms are happening outside the GIT, at the areas of assimilation.²⁴ So, they may be considered as āma at metabolic level. As ammonia, pyruvate and lactate do not have relevance in the assessment of effect of therapy, these parameters were not evaluated after the AGTP. Among different kinds of sensory dysfunction, auditory processing disorder (APD) was predominantly present in the evaluated kids as reported in earlier studies.²⁵ APD is basically an issue at the level of mind according to āyurveda. The processing of auditory input at the level of mind and intellect is explained in Carakasamhita.^{22b} According to Carakasamhita, memory (smṛti), the faculty of mind, is basically functioning on three inputs viz. visual (dṛṣṭa), auditory (śṛuta) and somato-sensory (anubhūta). Āma treatment contributes to this by improving the quality of rasadhātu and mind.

Out of assessed behavioral problems, stereotypy

Dos	Don'ts
<ul style="list-style-type: none"> - Always use food and water lukewarm - Take bath before main food - Add pepper, rock salt, ginger, curry leaves and turmeric daily in dishes - Use vegetarian food as far as possible - Drink only ginger boiled water - Encourage use of buttermilk fully devoid of fat - Time gap between sleep and last meal has to be kept minimum 1.5 hours 	<ul style="list-style-type: none"> - Avoid: Milk and milk products; wheat and wheat products; sprouts, greens; cool drinks and hydrated soft drinks; spicy and sweet food items; oily items; baked food and chocolates; fermented food. - Don't stay hungry beyond 20 minutes [not in cases of polyphagea] - Don't give food when the baby is not hungry

TABLE 4
Grading of āma and behavioral symptoms

Parameters	Grade
1. Abdominal pain:	
- No pain	0
- Only with some special food items	1
- Present more than 3 days in a week	2
- Present less than 3 days in a week	3
- Present almost all day	4
2. Diarrhoea:	
- No diarrhoea	0
- Only with some special food items	1
- Present at least once in a week	2
- Present more than once in week	3
- Present more than twice in a week	4
3. Constipation:	
- No constipation	0
- Only with some special food items	1
- At least once or twice in a week	2
- Present more than twice in week	3
- Bowel movement is possible only with drugs	4
4. Bloating score at the end of the day (6 pm)	
- No bloating	0
- Mild bloating	1
- Moderate bloating	2
- Severe bloating	3
- Very severe bloating	4
5. Appetite	
- Good appetite	0
- Take food with a little compulsion	1
- Take at least half of food on much compulsion	2
- Take only little food even with great compulsion	3
- Not taking food. if at all taking only once in a day	4
6. Tiredness:	
- No tiredness	0
- Mildly tired	1
- Moderately tired	2
- Severely tired	3
- Very severely tired	4

and crankiness were changed significantly after AGTP therapy. All other behavioral problems were reduced by AGTP, though they were not significant statistically. They may change significantly either by a long term application of AGTP or by application in large number of study samples. Due to the less number of cases, significance cannot be drawn statistically from this analysis. Excepting diarrhoea and tiredness, all other parameters of āma responded well with the AGTP. This may be owing to the fact that these conditions are intolerable to the pharmaceutical form kvātha.²⁶ Reduction in abdominal pain may be attributed to the normalization of vātadoṣa in the koṣṭha.²⁷ Dīpana and pācana (that which increases the biological fire as well as promotes conversion of biological materials) effects of the

TABLE 5
Effect of AGTP in behavioural and gut symptoms

Parameters	+ SEM		p
	BT	AT	
1. Behavioural symptoms:			
- Sensory dysfunction	0.10 ± 0.069	0.05 ± 0.05	>0.05
- Stereotypy	1.6 ± 0.25	1.2 ± 0.16	<0.05
- Crankiness	1.10 ± 0.324	0.15 ± 0.082	<0.05
- Spontaneous cry	0.25 ± 0.143	0.05 ± 0.05	>0.05
- Disordered sleep	0.60 ± 0.27	0.35 ± 0.17	>0.05
2. Gut symptoms:			
- Abdominal pain	1.5 ± 0.256	0.15 ± 0.082	<0.001
- Diarrhoea	0.45 ± 0.1846	0.10 ± 0.06882	>0.05
- Bloating	1.45 ± 0.39	0.15 ± 0.082	<0.05
- Constipation	0.55 ± 0.22	0.10 ± 0.069	<0.05
- Lack of appetite	0.70 ± 0.26	0.10 ± 0.069	<0.05
- Increased tiredness	0.10 ± 0.069	0.05 ± 0.05	>0.05

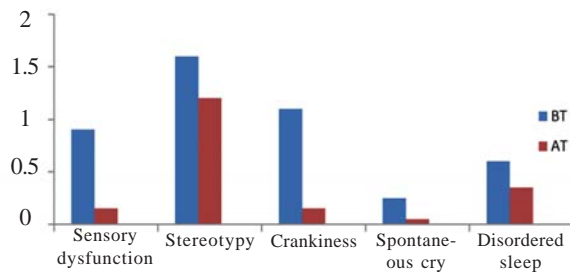


Fig. I. Effect of AGTP in behavioural symptoms

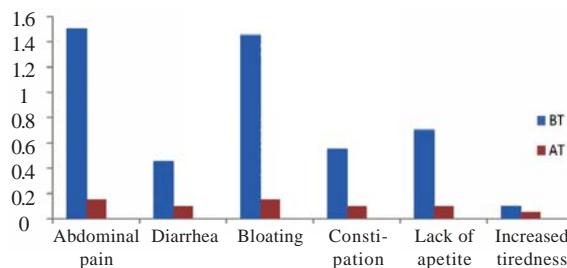


Fig. II. Effect of AGTP in gut symptoms

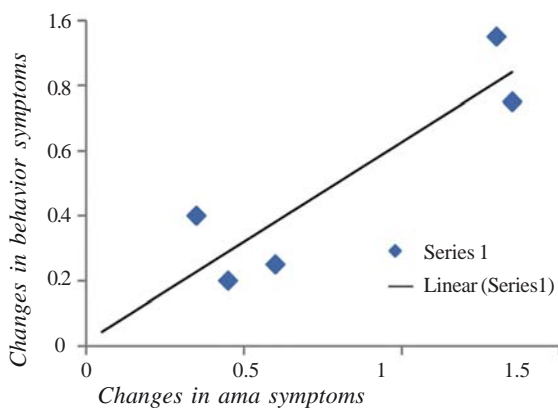


Fig. III. Correlation of change in āma symptoms and behavioural problems after AGTP

constituent drugs along with viśahara property of Vilvādi guḷika^{19c} contributed to the reduction in bloating, constipation and lack of appetite.

Conclusions

Autism presents with symptoms of āma at both GIT and metabolic level. Āyurveda treatment principles for āma help to reduce the symptoms. An AGTP as used in the current study significantly changed the behavioral problems of autistic children.

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Efficacy of āyurvedic treatment modalities, behaviour therapy and a combined approach in ADHD - A three-arm comparative clinical trial

Thushara Suresh Kumar and Prakash Mangalasseri

ABSTRACT: Attention Deficit/Hyperactivity Disorder (ADHD) is the most commonly diagnosed child psychiatric disorder. Children with ADHD are found to have lower academic achievement, impaired social relationships within the family and with the peer group. ADHD prevalence is estimated to be 5-10% in the Indian paediatric population. This disorder carries significant public health implications in view of its prevalence. The persistence of these problems highlights the need for an effective management. A comparative clinical trial was conducted in 30 participants to compare the efficacies of āyurvedic treatment modalities and behaviour therapy separately and combined. Though all the treatment approaches individually were highly significant, combined approach of āyurvedic treatment modalities and behaviour therapy showed more efficacy than individual approaches.

Key words: Attention Deficit/Hyperactivity Disorder, Āyurveda, Behaviour therapy.

The incidence of psychiatric disorders in children is on a rise to the extent that it is becoming one of the main causes of morbidity. It has been estimated that approximately one third of the children attending a paediatric clinic suffer not from physical but primarily from psychological illness.¹ Attention Deficit/ Hyperactivity Disorder (ADHD) is the most commonly diagnosed child psychiatric disorder. The prevalence of ADHD worldwide is estimated to be 5.29%.² It is said to be 5-10% in the Indian paediatric population.³ Disease is characterized by either significant difficulties of hyperactivity, inattention and impulsiveness or a combination of the two. Seldom do such children remain in one position for more than few seconds. They are seen as fidgety, constantly in motion and a bit wild in public places such as restaurants. Attention to any task cannot be sustained; hence the term Attention Deficit/ Hyperactivity Disorder is coined.⁴

Children with ADHD are found to have lower academic achievement, impaired social relationships within the family and with the peer

group. ADHD affects school-aged children and resulting in restlessness, impulsive behaviour and lack of focus which impairs their ability to learn properly. Studies following school-age children with ADHD find strong persistence of the symptoms over a time with high rates of delinquent behaviours; usually in spite of treatment.⁵ This disorder carries significant public health implications in view of its prevalence. Further it is a chronic disorder with 30 to 50 percent of those individuals diagnosed in childhood carrying these symptoms into adulthood. Its symptoms can be difficult to differentiate from other disorders, increasing the likelihood that the diagnosis of ADHD will be missed.⁶ The problems of ADHD not only affect the individual who suffer from the symptom but also the caretakers' family and society too.⁷ The persistence of these problems highlights the need for an effective management. ADHD management usually involves some combination of medications, behaviour therapy, lifestyle changes and counselling. Pharmacologic management of ADHD in modern medicine is

mostly with stimulant medications, antidepressants and antipsychotics. Long-term administration of these drugs is reported with complaints like initial insomnia and appetite reduction, followed by headache, irritability, dysphoria, liver toxicity, etc. More than that administration of these drugs in the tender age itself is a much sorrowful condition.⁸ Many āyurvedic treatment modalities and behaviour therapy have been found to be effective in routine clinical practise for the management of ADHD. There is an increasing awareness of integrated and multimodal management strategies including psycho-education, pharmacotherapy and cognitive behaviour therapy in this field.⁹

Naḷadādi ghr̥ta is an āyurvedic psychotropic compound which contains 17 herbs, rock salt and milk processed in cow's ghee. The main ingredient is śaṅkhaṇṇi (*Clitoria ternatea*), which is added 3 times in quantity than the other drugs. It also contains yaṣṭimadhu (*Glycyrrhiza glabra*). Both of these are considered as excellent psychotropics (medhyarasāyana).¹⁰ Naḷadādi ghr̥ta is considered as virtuoso restorative (Pratibhārasāyanam). It is also explained that even mute or retarded person will become talkative by regular administration of this drug. It improves memory, intellect and health, and the person would not get any type of disease.¹¹ *Clitoria ternatea* is used as nootropic or brain tonic in traditional systems of medicines. *Clitoria ternatea* is a potential memory enhancing agent used in treating dementia.¹² It contains alkaloids betaine, sankhaphushpine and evolvine, scopoletin, scopolin, umbelliferone, etc and is reported to have nootropic action.¹³ Ethanol extract of arial root showed anxiolytic and adaptogenic activity.

The root and rhizome of *Glycyrrhiza glabra* is an efficient brain tonic. It increases the circulation into the central nervous system and balances the sugar levels in the blood. It is having significant memory enhancing activity in dementia. Liquorice significantly improved learning and memory of scopolamine induced dementia. The main constituent of *Glycyrrhiza glabra* is glycyrrhizin. The protective effect of liquorice extract may be

attributed to its antioxidant property by virtue of which susceptible brain cells get exposed to less oxidative stress resulting in reduced brain damage and improved neuronal function thereby enhancing the memory.¹⁴ The same way, the other ingredients like āmalaki (*Phyllanthus emblica*), śuṅṭhi (*Zingiber officinale*) and vaca (*Acorus calamus*) also possess memory enhancing and psychotropic effect.^{15,16,13} Naḷadādi ghr̥ta has previously administered in a trial on ADHD cases against Kūsmāṇḍaghr̥ta (Kshama Gupta *et al*, 2007).

Ṭaḷam, a speciality treatment prevalent among Kerala physicians, is a procedure of keeping the medicinal paste over the vertex for a specific time. There is a custom of placing ṭaḷam during the sudation treatment procedures in order to prevent the perspiration of head. It is done with a paste made by mixing appropriate medicinal powders in medicated oils or aqueous extracts. It is applied on the vertex in the diameter of one rupee coin and the thickness about one fingerbreadth. The paste is kept over the head for a period of 45 minutes. Indications of ṭaḷam include psychological problems, insomnia, neurodegenerative disorders, premature greying, skin diseases, etc.¹⁷ Traditionally it has a superior role in the management of many paediatric diseases, especially of psychological origin.

Application of Pañcagandhacūrṇam over scalp (śirolepana) is mentioned in Ārogyarakṣākalpadrumam (Unmādaparakaraṇam) in the management of psychiatric complaints of children.¹⁸ It acts mainly by its cooling potency (śītavīrya). It is very effective in paittika type of psychiatric problems and fainting (mūrcha).¹⁹ Conventionally, Pañcagandhacūrṇa is widely practised for ṭaḷam especially in paittika disorders. Kṣīrabalātailam is mentioned in all āyurvedic classics, specifically in vātapitta ailments. The ingredients of this preparation are: cow's milk (kṣīra), *Sida alnifolia* (bala) and sesame oil (tila taila).²⁰ Internal administration of Naḷadādi ghr̥ta and ṭaḷam of Pañcagandhacūrṇa along with Kṣīrabalātaila are conventionally practised in ADHD in territory care

āyurvedic health institutions but the outcome has not documented. Further there is lack of a multi-facet research approach in āyurveda towards the condition of ADHD. So, a study was undertaken to compare the efficacy of these āyurvedic treatment modalities against behaviour therapy and to evaluate the combined efficacy of āyurvedic treatment modalities and behaviour therapy in ADHD.

Materials and methods

A three-arm comparative clinical trial was conducted in 30 participants. Among them 20 participants satisfying the DSM-IV diagnostic criteria of ADHD were selected from Manaśānti OPD, V.P.S.V. Ayurveda College, Kottakkal and randomly allocated into Group 1 and Group 2. Other 10 participants were selected from Rehabilitative Institute for Cognitively and Communicatively Challenged (RICCCH), Edarikode and allocated into Group 3. Group 1 received āyurvedic treatment modalities, which included internal administration of Naḷadādi ghr̥ta (purchased from Arya Vaidya Sala, Kottakkal Batch no. 143167) at a dosage of 5 ml twice daily after food and taḷam with Pañcagandhacūrṇam and Kṣīrabalātailam in the evening around at 3.30 for 45 minutes. Group 2 received the above treatment modalities along with behaviour therapy and the Group 3 received only behaviour therapy. Duration of interventions was 1 month with an equal follow up period.

Selection criteria

Participants fulfilling DSM - IV diagnostic criteria for ADHD within the age group of 5-12 years after obtaining informed consent from parents were selected for the study irrespective of sex, caste, religion and economic status. Subjects with mental retardation, pervasive developmental disorder, epilepsy and other neurological disorders, those who are contraindicated for snehana therapy, and those undergoing other psychopharmacological interventions were excluded from the study.

Assessment criteria

The total duration of study was 18 months in

which 1 month of intervention and an equal follow up was done for each participant. Assessment was done with Conner's rating scale for ADHD before treatment, after one month of treatment, and after the follow up. Using Conner's rating scale for ADHD the mean scores before and after intervention were noted and relief in percentage were calculated. For analyzing the data within the group, Student's paired 't' test was used and for comparing the groups 'One-way Anova' and Unpaired 't' test were used. The statistical calculations were done using SPSS - 14th version software.

Ethics committee clearance was obtained for the final report from the Institutional Ethics Committee of V.P.S.V Ayurveda College, Kottakkal vide ref no. IEC/CL/003/11 dated 18/04/2013.

Results

On analysing the demographic data, out of the 30 participants, 50% found belonged to be under the age group of 5-8 years and the other 50% under 9-12 years; of them, 83% were males and 17% were females. 57% of cases presented with the history of delayed milestones in which delay in language development was found in 60% of cases. Majority of cases (63%) reported poor adjustment to school, 17% showed change of schooling, 87% showed poor scholastic performance and 77% of ADHD children had poor peer relationships and 60% were having learning disorders. 13% of the participants in the present study were strict vegetarians and the rest 87% consumed mixed diet. Excessive intake of sweet, chocolate and of bakery items was found in 45% cases.

Using Conner's rating scale the improvement after therapy on the parameters: 'often fidgeting or squirming', 'difficulty in remaining seated', blurring out answers to questions', 'difficulty in following instructions', 'difficulty in sustaining attention to tasks', 'often shifting from one uncompleted activity to another', 'difficulty in playing quietly', 'often talking excessively', 'often interrupting or intruding on others', 'often does not seem to listen', 'often losing things necessary for tasks'

and ‘engaging in physically dangerous activities’ showed statistically significant improvement in Group 2 children (received both āyurvedic intervention and behaviour therapy); but after the follow up period, this improvement didn’t sustain in ‘difficulty in remaining seated’ and ‘difficulty in sustaining attention to tasks’.

Group1 children (āyurvedic intervention alone) showed statistically significant improvement in ‘often fidgeting or squirming’, ‘often talking excessively’, ‘often interrupting or intruding on others’ and ‘engaging in physically dangerous activities’. But after the follow up period, this improvement didn’t sustain in ‘often fidgeting or squirming’.

Group 3 (behaviour therapy alone) showed statistically significant improvement in ‘often fidgeting or squirming’, ‘difficulty in remaining seated’, ‘difficulty in following instructions’, ‘often interrupting or intruding on others’ and ‘engaging in physically dangerous activities’. But after the follow up period, this improvement didn’t sustain in ‘often fidgeting or squirming’, ‘difficulty in remaining seated’, ‘difficulty in following instructions’ and ‘engaging in physically dangerous activities’.

The total effect the treatment showed 11.8% improvement in Group 1, 28% in Group 2 and 18.36% in Group 3 (Table 1) significance with p value of <0.001 in each group and also the groups were comparable. The total effect after follow up period (Table 2) was 10.7%, 24% and 10% respectively in three groups which was also statistically significant with a p value <0.001 in each group. On multiple comparison, the difference in the effect of the therapy after treatment between Group 2 and 1 and Group 2 and 3 were significant with p <0.001 and <0.01 respectively. But the difference in effect of therapy after treatment between Group1 and Group 3 was insignificant. In both the domains of inattention and Hyperactivity - Impulsivity, statistical analysis revealed significant improvement in all the groups. The overall result of therapy using Conner’s ADHD rating scale among all the three groups

shows that none of them got complete cure, marked improvement or moderate improvement. In Group1 only 10% of participants got mild improvement and remaining 90% were unchanged. In Group 2 all the participants got mild improvement and in Group 3, 50% of participants got mild improvement and the other 50% remained unchanged.

Discussion

In the present study 83% of the participants were male. Researchers postulate that gender differences in behavioural manifestation correspond to neurophysiological changes seen in human and animal studies, in which males show an overproduction and subsequent pruning of dopamine receptor density in comparison to females. This over production corresponds to the hyperactive behaviour.²¹ The difference in ratio is also attributed to the over representation of boys in clinical samples due to a more readily noticeable clinical presentation in boys and less impairment seen in girls. Studies have shown that girls with ADHD are predominantly inattentive type and show lesser level of hyperactivity, learning

Group	BT	AT	Mean diff.	% of relief	SD	t
1	26.9	23.7	3.2	11.8	1.6	6
2	30	21.7	8.6	28	1.7	15
3	29.4	24	5.4	18.36	2.8	5.93
P = <0.001						

Group	BT	AT	Mean diff.	% of relief	SD	t
1	26.9	24	2.9	10.7%	1.5	6.08
2	30	23.1	7.2	24%	2.25	10.1
3	29.4	26.5	2.9	10%	1.59	5.73
P = <0.001						

disability and intellectual impairment.²² Bruce L baker *et.al*²³ in 2010 reported that delayed developmental mile stones, motor development and speech were significantly associated with ‘Hyper kinesis’ cluster. The data on scholastic performance in the study were in confirmation with the fact that children with ADHD tend to show pervasive problems in social adjustment. Relative to other children they have few friends and experience high rates of peer rejection. ADHD children have inattention, difficulty with decision making and planning, faulty judgment, difficulty in reading, writing, calculations and language skills, low self esteem, aggression, hyperactivity, etc., resulting in poor scholastic performance leading to early school termination, rejection by peers and other consequences.²⁴ The data obtained in the present study is in consistent with the existing data. The dietary habit wise distribution of the subjects in the study confirm the fact that elimination of refined sugar and food additives produces dramatic improvements in the symptoms of ADHD.

Āyurvedic treatment modality, behaviour therapy and combined approach are found to be beneficial in various domains of ADHD and they are having not much difference in efficacy. But only combined approach is sustaining its effect in the follow up period. The medications given would have a potentiating effect on outcome of behaviour therapy and that might be the reason for high percentage of improvement in the combined approach. On individual comparison of the groups, the difference in efficacy was statistically significant between the combined group and the āyurvedic treatment modality group. Also the difference was significant between the combined group and behaviour therapy group. But the difference in efficacy between the āyurvedic treatment modality group and the behaviour therapy group was insignificant. So, there is not much difference in outcome between āyurvedic therapy group and behaviour therapy group immediately after treatment. But combined approach gives maximum result compared to individual groups. During the follow up also the same effect is maintained. It is

also found that the effect in behaviour therapy group was less sustainable compared to āyurvedic therapy during follow up. In conclusion, all the three modalities improve the signs and symptoms of ADHD considerably and the combined approach has the best outcome (Fig. I & II).

Probable mode of action of selected therapies

Ghṛta (ghee) is considered as the best mode of preparation in psychological disorders²⁵ due to its target action on nervous system. In Naḷadādi ghṛta, majority of ingredients possess tiktaraśa as their predominant taste. Tiktaraśa is having medhya property,²⁶ i.e. it improves higher mental functions. Also it was observed that the drugs which are predominant in tiktaraśa have a pittaśāmaśa effect. By this property, elimination of vitiated pittadośa is ensured to an extent. Of the five basic

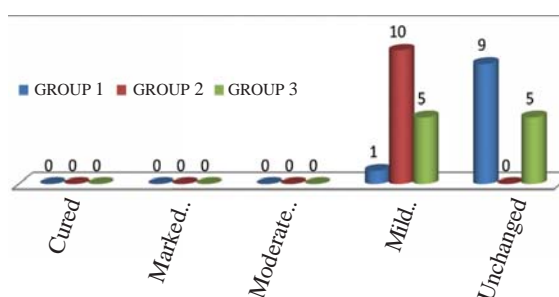


Fig. I - Overall result of therapy

elements that form part of any matter, ākāśabhūta (ether) and vāyubhūta (air) take part in the composition of drugs having tiktaraśa.²⁷ Since ākāśabhūta is the element that carries the properties of satvaguṇa (mental humour responsible for clarity) the most, tiktaraśa is expected to improve mental function. Also most of the drugs are anulomana (regularize bowel), dīpana (digestive), medhya (nootropic) and rasāyana (nutritive) which all are directly beneficial for improving the signs and symptoms of ADHD. By the virtue of the property of ingredients, Naḷadādi ghṛta alleviates vāta-pittadośa. Vāta and pitta are the main dośas involved in the pathophysiology of ADHD. So, by the vāta-pittahara property, Naḷadādi ghṛta is beneficial in

the management of symptomatology of ADHD. Moreover, Naḷadādi ghr̥ta is medhya and rasāyana and is described as 'pratibhārasāyanam'.¹¹

The site of application of taḷam (vertex) is important for controlling the vitiated prāṇavāyu and udānavāyu which are subtypes of vātadoṣa responsible for higher mental functions like cognition, behaviour and speech. The drugs used for taḷam i.e. Pañcagandhacūrṇam and Kṣīrabalātailam, are found to be of cooling potency (śīta-vīrya) and unctuous property (snigdhaḡaṇa).¹⁸⁻²⁰ Usually external measures of treatment act by its ḡuṇa and vīrya. Head is the seat of sense organs (indriyas) and thus by the indriyaprasādana effect of Kṣīrabalātailam, by direct oleation to the head in the form of taḷam, produces clarity of sense organs.

Recent research has demonstrated that differential experience produced both structural and biochemical changes in the brain. Intensive behaviour therapy has proved to help rewire child's brain by bringing out changes in neural plasticity and those connections can be established through repetition and reinforcement.²⁸

Effect of therapy in the main domains of ADHD

The response to therapy in ADHD was assessed in two different domains - domain of inattention and domain of hyperactivity/impulsivity. But the response obtained was different in each domain. Maximum improvement was obtained with regard to hyperactivity compared to inattention. Different factors thought to be responsible for the above mentioned result are discussed below (Tables 3-5):

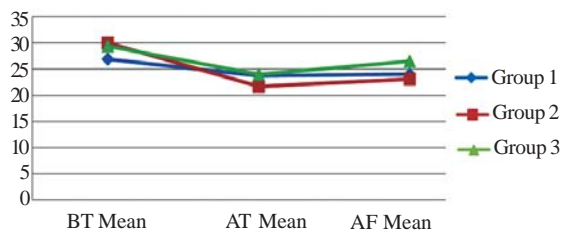


Fig. II - Total effect of therapy on Conner's rating scale

Inattention is caused by a problem with higher mental function. So, it may not be easy to modify or rectify by means of a short duration therapy. Also it takes a long duration of treatment and a long duration of assessment and follow up to correctly score for any improvement in the domain of inattention. Adding to that, the overall outcome depends on the type of drug used for the treatment. Mainly stimulant medications are necessary to improve inattention. In the present study, the medications used were not that much stimulant in action.

Meanwhile, the result obtained in the domain of hyperactivity/impulsivity was promising. The interventions used in the present study were mostly vātapitta alleviating. Vāta and pitta are the main doṣas involved in the clinical presentation of

Group	BT	AT	Mean diff.	% of relief	SD	t	P
1	13.4	12.5	.9	6	1.1	2.46	<0.05
2	14.6	12	2.6	18	2.6	5.4	<0.001
3	14.6	12.9	1.7	11	2.4	4.6	<0.01

Group	BT	AT	Mean diff.	% of relief	SD	t	P
1	13.5	11.2	2.3	17	1.05	6	<0.001
2	14.4	10.6	3.8	26	1.75	6.8	<0.001
3	14.6	12.5	2.1	14	1.9	3	<0.01

Group	Inattention	Hyp-imp*
Ayurvedic treatment modality	6	17
Combined group	18	26
Behaviour therapy	11	14

*Hyp-imp = Hyperactivity-impulsivity

hyperactivity and impulsivity. Hyperactivity is a gross physical observation which makes both the parent and the child equally uncomfortable. Also this is the most common symptom with which most parents bring their child for medical attention. Hence, even a minute improvement is notified or even magnified by the parent or the child. As the scale used in this study was parent rating scale, these scoring influenced the study outcome in a great way. It has been proved that behaviour therapy can cause rewiring of neurons. So, each session of behaviour therapy cause more and more neuronal rehabilitation to overcome its functional deficit. The more percentage of improvement observed in the combined approach can be attributed to the accentuating effect of the drug on the neuronal rewiring by behaviour therapy.

Conclusion

The study intended to compare the efficacy of āyurvedic treatment modalities, behaviour therapy and combined approach in Attention Deficit/Hyperactivity Disorder. Based on the findings from the clinical study, it could be concluded as:

- Individually all the three treatment approaches, i.e. āyurvedic treatment modality, behaviour therapy and combined approach were found to be highly significant ($p < 0.001$) in reducing the signs and symptoms of ADHD on Conner's rating scale.
- Both the difference in efficacy between the combined approach and āyurvedic treatment modalities ($p < 0.001$) and the combined approach and behaviour therapy ($p < 0.01$) were statistically significant.
- The difference in efficacy between the āyurvedic treatment modalities and behaviour therapy was not statistically significant ($p > 0.05$).
- On an overall assessment, Combined approach of āyurvedic treatment modalities and behaviour therapy showed more efficacy than individual approaches which is also better sustained during follow up.

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Developing an instrument for assessing mental health based on āyurvedic concept - A pilot study

K.N. Ananda Lakshmy and T. Sree Kumar

ABSTRACT: In tool development, the data collected from various methods translate the research objectives into specific questions or items. The responses of these items provide the conclusions required to achieve the research objectives. A pilot study was conducted as part of developing the instrument for assessing mental health, based on āyurvedic concept - triguṇa. The study was done in 50 subjects. 75 questions based on triguṇas using Likert type scaling were validated. Cronbachs alpha for the three subscales found to be ranged from 0.72 to 0.75. Cronbachs alpha based on standardised items was 0.83. Rajoguṇa was found to be strong negative correlation with tamoguṇa and satvaguṇa. The Pearsons correlation coefficient was significant at 0.01 level.

Key words: Tool, Focus group discussion, Item generation.

Triguṇas are attributes of manas which differentiate the individuals based on their psychological constitution. Psychological characters are dependent on the relative dominance of these three guṇas. Satvaguṇa is considered most auspicious and free from defects. Health, elegant physique, gentleness, cleanliness and righteousness are the qualities of satvaguṇa, while the qualities of rajoguṇa include talkativeness, pride, anger, vanity and jealousy. Tamoguṇa is associated with fear, ignorance, sleep, laziness and grief.¹

Accurate assessment of the predominance of these psychological characters helps in individual development, interpersonal skill development and development of leadership qualities. Behaviour based on triguṇas is the reflection of interactions among a wide range of underlying factors.

Tool development is the process by which questionnaires are developed. An instrument is developed by arriving at a formalized set of questions for obtaining information from respondents. The dominant objective is to translate the researcher's information or needs into a set of specific questions, which the respondents are

willing or able to answer. Instrument enables quantitative data to be collected in a standardized way so that the data are internally consistent and coherent for analysis.

Background and rationale

First, a questionnaire is developed based on triguṇa to assess the mental health status. Once it is prepared and the mental health status of an individual is identified as sāvika, rājasa or tāmasa, it can be utilized in various fronts including physiology and psychology. There is a need of drawing a scale based on triguṇa derived from classic literature, qualitative research with focus groups and psychometric testing of an existing scale. It needs to be validated on a representative population sample. So, a descriptive study was undertaken with an aim to develop an instrument for screening mental health based on āyurvedic concept. The study setting was at Trivandrum Dist., Kerala.

Materials and methods

Inclusion criteria:- Individuals under the age group of 20-40 years; who furnished the informed consent.

Exclusion criteria:- i) Cases suffering from any type of psychological morbidity; ii) those under medication (anti convalescent, anti-hypertensive drugs, anti depressive drugs); iii) narcotics and alcoholics; iv) those who are not interested to give informed consent.

Sampling technique

Stratified random sampling and multistage sampling:- Generally, the sample size is fixed considering the number of variables i.e. it should be 10 subjects per variable.² A list of all the urban towns, rural villages and coastal villages of Thiruvananthapuram district was prepared as the first stage of the study. Then a town, a rural village and a coastal village were selected from the list so prepared by simple random sampling technique. The sample size from urban town, rural village and coastal village was fixed as 220, 130 and 50 respectively according to the population size. From the selected town, rural village and coastal village, every consecutive house that meets the inclusion criteria was selected till the sample size is reached. (The total sample size for main study was 400.)

Steps undertaken for development of scale

The first step in instrument design is to specify the information needed. A continual review of the earlier stages of the research project, particularly the specific components of the problem, the research questions and the hypotheses, were reviewed to set the domains. Item generation was done in 2 levels: a) with literature review and discussions with experts and b) based on focus group discussions.

Item generation:- Questions were designed with the target respondents in mind and taking into account their educational level and experience. This was done by extensively reviewing the literature and based on discussions conducted with experts in the field of āyurveda and psychology. The language used and the context of the questions were checked so that they are familiar to the respondents. Questions that failed to keep in mind the characteristics of the respondents, particularly their educational level and experience, were reviewed.

Framing the individual questions

Content review:- Each item based on satva, raja and tamo guṇas was reviewed to determine what should be included in each question. This involved a purpose of whether a question is necessary and whether more than one question is needed to obtain the information in an unambiguous way. Questions that did not directly address the research problem was checked and eliminated.

Focus group discussions (FGDs)

The significance of FGDs in framing questions can be summarised as follows:

- FGDs create a group discussion. Group discussion produces data and insight that would be less and easy to get without interaction found in a group setting.³
- Listening to others' verbalized experiences stimulates memories, ideas, and experiences in participants. This is also known as the group effect.
- Group members discover a common language to describe similar experiences. This enables to capture the form of native language or 'vernacular speech' to understand the situation.
- The literary concept is brought to real or real life experience in FGD.⁴

The topic of discussion was based on following areas:

- Healthy mental status - base qualities
- Measurable attributes - grading, scoring
- Bringing the literary hints to measurable scoring sentences in local language
- Develop appropriate wordings to be used in a questionnaire.
- Collecting data to understand people's actual thoughts, feelings, beliefs, and perceptions.

Item selection:- To assess the particular attribute, the items were selected as per the capacity of questions through a series of steps that involved experts in the field of āyurveda and psychologists. After item selection, translation of items into local language and back translation to English language were done by linguistic experts. A structured instrument with 75 items with Likert scaling⁵ as responses was then given scores.

Pilot study

Sampling:- 50 individuals were randomly selected from the urban, rural and coastal population of Thiruvananthapuram district i.e. 26 from urban area (housing society area, near Transport office), 14 from rural area (Kanjirampara) and 10 from coastal area (ward 77, Bheemapally). [The respective sample size was drawn by dividing the main study sample (400) by 8, as the total sample was 1/8th of the main study]. Of 50 subjects, 27 were males and 23 were females.

Ethical consideration:- i) Consent from the subjects obtained in a written performa, ii) absolute confidentiality maintained, iii) no remuneration for partaking in the study, iv) full freedom to the subjects to withdraw from the study at any time and v) Consent from the authority (respective Co-operations and Wards).

Observation and analysis

The responses of the Likert scaling was fed in excel sheet. Percentage of satva, rajo and tamo guṇa was calculated based on the scores obtained. Cronbach’s Alpha and Pearson’s correlation coefficient were used for analysis.

Cronbach’s Alpha:- Cronbach’s α coefficient ranges in value from 0 to 1 and may be used to describe the reliability. The higher the score, the more reliable the generated scale is. Nunnally (1978) has indicated 0.7 to be an acceptable reliability coefficient but lower thresholds are sometimes used in the literature. By convention, a lenient cut-off of 0.60 is common in exploratory research; alpha should be at least 0.70 or higher to retain an item in an adequate scale; and many researchers require a cut-off of 0.80 for a good scale.⁶

The internal reliability observed on administering the instrument with 75 items on 50 individuals was 0.83 [No. of items - 75; Cronbach’s α - 0.793; Cronbach’s α based on standardized items - 0.832]. The internal consistency of 26 items of satva scale showed 0.75, 23 items of rajoguṇa internal consistency showed 0.72 and 26 items tamoguṇa scale internal consistency showed 0.73 (Table 1). Rajoguṇa and tamoguṇa are negatively correlated at 0.01 level and rajoguṇa is negatively correlated

to satvaguṇa also. The Pearson Correlation for satva, rajas and tamas response percentage are shown in Table 2.

Discussions

Usually, the validity of the 75-item instrument is adequate. Rajoguṇa represents activeness whereas tamoguṇa inertness. The attributes of satva and rajoguṇa are also opposite. This explains the highly significant negative correlation seen in the responses. The weak positive correlation found in satva and tamas can be attributed to the strength of sample size as it was a pilot study.

Cronbach’s alpha does not change drastically if the items are reduced to 40. So in the final administration with 400 subjects from urban, rural and coastal population, the number of items is expected to be reduced to 40.

Conclusion

In this pilot study, Cronbach’s alpha of developed scale found good internal consistency and the value did not change even if the items reduced to

TABLE 1
Cronbach’s alpha for satva, rajo and tamo guṇa scales

Guna	Cronbach’s α	No. of items
1. Satva	.757	26
2. Raja	.727	23
3. Tama	.737	26

TABLE 2
Pearson correlation for satva, rajo and tamo guṇa response percentage

Description	Satva	Raja	Tama
1. Satva			
- Pearson correlation	1	-.807**	.444**
- Sig. (2-tailed)		.000	.001
- N	50	50	50
2. Raja			
- Pearson correlation	-.807**	1	-.799**
- Sig. (2-tailed)	.000		.000
- N	50	50	50
3. Tama			
- Pearson correlation	.444**	-.799**	1
- Sig. (2-tailed)	.001	.000	
- N	50	50	50

**Correlation significant at the 0.01 level (2-tailed)

40. The attributes of rajoguṇa and tamoguṇa were found to be negatively correlated; so also rajoguṇa and satvaguṇa. This corroborates the literary hint.

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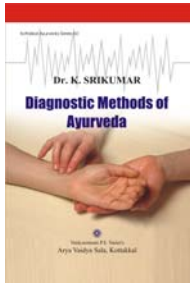
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Diagnostic methods of Ayurveda

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In ancient times physicians framed diagnostic methods using the tools available at that time. Most of them were subjective. Today one requires objective parameters to understand the diseases and its pathology. This work attempts to correlate āyurvedic diagnostic methods with the modern parlance. This has been done without prejudice to the basic principles. The whole work is divided into five major sections based on dōṣa, agni, rōgaparīkṣa, rōgīparīkṣa and other contributing factors for disease.



Smṛti: Unexplored tool of āyurveda psychotherapy

K.V. Dilipkumar

ABSTRACT: In recent years the popularity of āyurveda has tremendously increased globally. It is doubtful that the psychotherapy - satvāvajaya treatment - gets adequate importance during this development phase. Therefore, it is right time that more and more experiences need to be shared to have better understanding in the management of psychosomatic diseases. In this article an attempt is made to widen the understanding of practice of smṛti as a psychosomatic tool. Classical text provides only a limited description on this theme. Hence, here on the basis of clinical experience of dealing psychological and psychosomatic disease interpretations were made on various aspects of smṛti. Explanations on philosophical and psychological concepts, relation to dreams, influence on unconscious behavior, role in psychosomatic diseases and localisation of smṛti were given. Psychotherapeutic experiences of usage of smṛti in psychosomatic diseases were shared. The article emphasises the need of deeper understanding of smṛti and its application in clinical practice, so that āyurveda can reestablish its image as a holistic system of medicine.

Key words: Smṛti, satvāvajaya, psychotherapy, psychosomatic

The main reason for global attraction to āyurveda in the modern era is its image as a holistic system of medicine. Well rooted philosophical, spiritual, psychological, social, physiological and physical understanding and its collective application in diagnosis and treatment keeps āyurveda distinctive from any other systems of medicine. But, due to the economic reasons pharmaceutical sector of āyurveda dominated over other features and proclaimed it as yet another herbo-mineral medicine. This trend suppressed psychotherapeutic potential of āyurveda. Since the incidence and prevalence of psychosomatic diseases are high rocketing, satvāvajaya treatments are becoming much more significant. Somehow the tools of satvāvajaya treatments mentioned in Carakasamhita like jñāna (absolute knowledge), vijñāna (analytical knowledge), dhairya (will-power to restraint senses), smṛti (memory) and samādhi (transcendence to pure consciousness) are not commonly used in day to day practice of āyurveda physician.¹ A proper analysis of smṛti can reveal that it is a deep practice of psycho-therapy through which, we could approach many psychological and

psychosomatic problems directly and resolve them.

Smṛti

Smṛti is a Sanskrit word, from the root 'smara' which means 'remembrance, reminiscence, thinking of or upon, calling to mind', or simply 'memory'. In philosophy, smṛti is used with another sense as 'recollection' of sacred literature based on human memory, as distinct from the Vedas, which are considered to be śruti (literally 'what is heard'), or the product of divine revelation. In this article the term smṛti is used to sense as recollection of stored memory. Patañjali defined memory as recollection of experience of sensory objects.² The information gathered any sense faculty including the mind is stored in deep layers of consciousness, with appropriate triggering factors they are brought to surface. There are four layers of consciousness; i) jāgrat (conscious or wakeful layer) ii) svapna (sub conscious layer) iii) suṣupti (unconscious layer) and iv) turīya (the fourth, super conscious layer). Memories are stored either svapna or suṣupti layers. In Carakasamhita, smṛti is defined as recollection of seen, heard and experienced things.³

Piled-up impressions

Philosophy of life in āyurveda is evolved from Sāmkhya and Yoga. According to these philosophies, man is pure soul; soul is pure knowledge and happiness. When soul conjugated with nature, the life is evolved. Thereafter, soul forget its reality and identify itself with attributes of nature. Basic attributes of nature are satva, rajas and tamas. Satva has similar features like soul i.e. pure knowledge and happiness. Rajas possess the features of ego, passion and arrogance. Tamas possess the features of ignorance, fear and laziness. All our experience from the moment of emergence of life is influenced by satva, rajas and tamas. The experience which is influence by satva provides correct knowledge and happiness whereas rajas and tamas provide wrong knowledge. Patañjali has termed memory as akliṣṭasmṛti that gives correct knowledge and kliṣṭasmṛti that gives wrong knowledge. This wrong knowledge is the basis for all emotions like sadness, anger, fear, jealous, guilt, envy and ego. For example, when a child is breast-fed by mother with love and care that attributes to the mental and physical development of the child, whereas, if the child is fed with unpleasant hot food, child acquires a fearful impression and allergic reaction of the body. Every individual have a collection of memories of visual, auditory or kinesthetic experiences with attached emotions. It can be evolved out of unfulfilled desire for some objects that was denied to the person. It can be a behaviour to mask some painful emotions out of physical or psychic trauma. The expression of these emotions is very much depending on the social approval. If the society does not accept the free expression of these emotions, they are pushed to deep unconscious to hide them. These piled up memories causes widening the gap between conscious and unconscious mind. Conscious mind avoids contact with unconscious to mask unpleasant feelings. These memories always attempt to come to the surface in the form of dreams, unconscious behavior and psycho-somatic symptoms.

Dreams

Dreams represent various mental activities and

states of mind. Major chunk of dreams are symbolic representation of memories which contain unresolved issues at conscious (jāgrat) level. While conscious mind is busily occupied with multiple problems, some of them can be transferred to the subconscious (svapna) mind. Problems which are unresolved for a longer period is shifted to unconscious (suṣupti) mind.

Unconscious behavior

In the developmental phase of a child, social values are strongly imposed by parents, friends, relatives, government and others of the society. Child gradually learns to wear a suitable mask which can get an appreciation from the society. Often people use very beautiful and expensive dresses, ornaments, make-ups, luxury cars, houses to create an impression as rich person. Similarly, people use behavioral mask to create an impression as kind, brave, intelligent and clever. In due course of time, the person forgets the true nature of him and identifies with mask he is wearing. When the person is getting an opportunity to transcend to his unconscious can provoke a behavior pattern which may not be acceptable to the conscious mind. As long as the person lacks the self-realization, psychologically he experiences uncomfortable conflicts. This prevents the psychological and spiritual growth. The person can behave in silly manner irrespective of his age and status.

Psychosomatic diseases

Manifestations of physical symptoms are yet another expression of consciously masked emotional memories piled up in the unconscious. Sometimes conscious mind also transfers the overload of stress to body unconsciously to feel the comfort. Initially they will feel it better to suffer physically than suffer mentally. Headache, body pain, tremor, giddiness, nausea, spasms, inflammatory pain, diarrhoea, insomnia, hypertension, itching and skin lesions are some of such symptoms. These symptoms can be an indication to serious pathological manifestation of diseases.

Localization of emotions

It is observed that on meditation some physical

symptoms could provoke some emotions like sadness, anger, fear, guilt, feeling of offence, hopelessness, indecisiveness, jealousy and loneliness. Also it is observed that focusing on some emotion it turned out to be physical discomfort. Some of the commonly expressed relation between emotions and physical feelings are given in the Table 1.

These observations correspond to the theory of Cakras. Sadness due to loss of love and loneliness often experience at Anāhatacakra, which is considered as the site of love. Fear develops symptoms in the stomach, where Maṇipūracakra, the seat of will power, is situated. Offence and guilt develop as bolus in the throat where the Viśuddhicakra, representing the moral values is situated. Work-stress and indecisiveness, which is related to intellectual process, create symptoms in the Ājñacakra in the form of headache and insomnia. These symptoms in the initial phase disturbs at prāṇic level to cause reversible changes in the physiology. Repeated and prolonged occurrence of the changes leads to structural damage.

What to memorize

We are like lost children. As if we started a journey from home and on the way we are misguided due to wrong knowledge with the influence of rajas and tamas. We forgot our identity and the way back home due to the ego. Therefore, we need to recollect all the misguidance so that the path to go back home will be cleared. The ultimate point to be remembered is that we are the self by nature.

The Self is purity, knowledge and happiness. With the influence of the carried over memories, the soul is masked. It is falsified as we are the Ego. This is the reason for ignorance and misery. After emergence of real memory one gets rid of misery.⁴ In fact all the spiritual studies are intended to reveal the memory ultimately.

How to memorize

Carakasamhita suggests eight techniques to recollect the memory.⁵ They are as follows:

1. Perception of cause (nimitta)
In many occasion we experience sadness, anger and fear without any conscious reason. If we contemplate on these emotions with closed eyes, gradually memory of an event that provoked the feeling will be revealed. During the contemplation mind may play some tricks in the form of sleepiness, distractions to some sensory pleasures, artificially create a pleasant sensation.
2. Perception of form (rūpagrahaṇa)
Dreams are visual world created by the mind to project good and bad memories symbolically to experience very sharp emotions with a protective mask. In day dreams and night dreams memories in the form of symbolic visuals are brought to the subconscious. Mind makes attempts to analyze these memories to resolve negative emotions attached to them. On a keen observation of these visuals, the memories attached to them will be revealed.
3. Similarity (sādrśya)
Similar to that of a computer, mind has a filing

TABLE 1
Emotions and respective physical feelings

Emotion	Physical symptoms
1 Sadness	Chest pain, body pain, nasal blockage, dyspnoea.
2 Anger	Burning sensation, itching, arthritic pain, increased body temperature.
3 Fear	Irritable bowel, gas formation, coldness of body, dyspnoea, palpitation.
4 Guilt	Bolus in the throat
5 Offence	Discomfort in the throat, heaviness in the chest.
6 Hopelessness	Tiredness of the body, heaviness of the body.
7 Indecisiveness	Headache, insomnia.
8 Stress at work	Headache, insomnia, neck pain, low back pain.

system. Hence, it is easy to recover using a search word. For example, how our brain works if we want to recognize a face that forgets the identity? If the person belongs to our age group, initially we search in the file of friends in our studentship. If not, go to file of colleagues. Sometimes if the person belongs to a certain race we can search in the file of people who belong to that race.

4. Contrast (viparyaya)

In contrast, mind's ability of sorting things having opposite qualities is utilized to memorize. For example: when you are asked to remember a person whom you deeply love, it may immediately remind you the person whom you extremely hate. Similarly, your effort to remember your happiest moment may remind your saddest event.

5. Predominance of satva (satvānubandha)

Predominance of satva ensures calmness of mind. Just as looking into calm lake expose the deep bottom on a sunny day, all the memories are easily revealed. This is what happens in hypnotic trance. When our conscious mind is deeply relaxed, even our childhood memories could be seen in its minute details.

6. Repetition (abhyāsa)

Repeated introspection clears strong negative emotions accumulated within. It makes easy to transcend to svapna or suṣupti to recollect the memories.

7. Constant thinking (jñānayogāt)

Logical understanding of the structure and mechanism of memory helps memorization easier. Study on self, intellect, memory, emotions, dreams gives an insight to the process and memories can be traced intellectually.

8. Repeated hearing (punaḥ śrutāt)

This is the technique used in hypnosis to remind some events or person by repeated suggestion by another person. This technique can be used to guide a person into contemplation. Suggestions are given in such a way that

the guide is very well tuned to all feelings empathetically.

Journey to smṛti

Techniques of inner journey are available in Patañjali's Yogasūtra. Āsanas and prāṇāyāma train to expand the awareness of body and its function. Pratyahara helps to withdraw the mind from sensory objects. Dhāraṇa (concentration) fixes the mind on a point for meditation. Dhyāna (uninterrupted awareness) deepens the awareness into svapna and suṣupti. Patañjali suggests sorrow (śoka), desire for sensual objects (viṣayarāgam) and dreams (svapna) as points for concentration. Inner journey can be performed either in sitting postures like padmāsana, vajrāsana and sukhāsana or in śavāsana posture. During practice, initially the environment has to be observed with closed eyes. Thereafter, body is to be observed keenly until all the muscles are relaxed. When muscles are relaxed, sensations of respiratory, neural and cardiac functions emerge distinctively to the conscious awareness. This is the stage of transcendence of mind from bodily awareness to the prāṇa awareness. Here any one-point can be chosen for concentration. Focusing the attention on sorrow or any other emotions like happiness, anger, fear, guilt, jealousy, envy, and hopelessness helps to deepen the awareness to svapna or suṣupti. Gradually, the memories associated with these emotions pop up. As soon as these emotions pop up, experience of suffering may intensify for a short period. During this phase, we could perceive these issues from multiple dimensions judiciously. Therefore the problem could be resolved easily and associated emotions subside and new revelation evolves. Patañjali says 'viśokāḥ vā jyotiṣmatī'⁶ - by subsiding sorrow, mind becomes luminous. Similarly, focusing on sensual desire unravels the memories of suppressed desires. Dhyāna (uninterrupted awareness) for some period in this point subsides the desire - 'vītarāga viṣayam vā cittam'.⁷ Memory has a tendency to project as images in the subconscious mind. Therefore, focussing of these dream images takes us to deeper layers of suṣupti and unravels the associated memories. After living in the dream

state for certain period, consciousness evolves with a new knowledge - ‘svapnanidrājñānāmbanam vā’.⁸

Power of smṛti

Carakasamhita, quoting from the experience of yogis and philosophers states that smṛti gives the real knowledge and pave the way to emancipation.⁹ Each trip to smṛti corrects a misunderstanding by reducing rajas and tamas to open up a new wisdom. It shows that at the deep state of smṛti, person transcends to the realm of turīya. It needs many repeated exposure to turīya to clear off all the memory and its associated emotions. During this process person becomes healthier mentally and physically. Therefore, this technique is considered to be the most powerful therapeutic technique. At the end of the clearance venture one realizes that ‘I am not this body’ (na etat aham) and ‘this body is not mine’ (na etat mama iti). This is called ‘satyabuddhi’.¹⁰ In the state of final renunciation, all sensations with their roots along with consciousness, knowledge and understanding cease completely. This state is known as samādhi or mokṣa. Carakasamhita proclaims that this is the state of absolute health - Yogemokṣe ca sarvasāmvedanānām avarttanam.¹¹ All pains (physical, mental and spiritual) ceases to exist in the state of yoga (union with self) and mokṣa (emancipation).

Conclusion

- Smṛti is the source of all piled up negative emotions.
- These emotions are reasons for dreams, unconscious behavior and psycho somatic diseases.
- Deeper awareness of these memories helps to eliminate the attached emotions.

- Application of eight techniques suggested by Caraka helps to travel internally to experience the memories.
- The knowledge revealed at the end of memory meditation releases negative emotions and cures psychological and psychosomatic diseases.
- This methodology is suggested to cure not only the physical and mental diseases but also to develop the personality to the realm of Samadhi (spiritual enlightenment).
- Popularization of these tool into common āyurveda practices will bring back the glory of āyurveda as a holistic system of medicine.

Footnotes:

1. Carakasamhita, Sūtrasthānam, 1/58
2. Patanjali’s Yogasutra, 1/11
3. Carakasamhita, Śārīrasthānam, 1/149
4. Carakasamhita, Śārīrasthānam, 1/147
5. Carakasamhita, Śārīrasthānam, 1/148-149
6. Patanjali’s Yogasutra, 1/36
7. Patanjali’s Yogasutra, 1/37
8. Patanjali’s Yogasutra, 1/38
9. Carakasamhita, Śārīrasthānam, 1/150-151
10. Carakasamhita, Śārīrasthānam, 1/152-153
11. Carakasamhita, Śārīrasthānam, 1/137

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Efficacy of Sarjarasādi lepa in vipādika - A clinical study

J.A.D.P.P. Jayakody and Abegunasekara N.S.

ABSTRACT: Vipādika, a dry skin disease characterized by severe itching and intense pain in feet or palms, is considered as one of the kṣudrakuṣṭha in āyurveda. A research was conducted to find out the efficacy of a herbal cream in the management of vipādika. 30 patients randomly selected from the dermatology clinic, OP unit of Gampaha Wickramarachchi Ayurvedic teaching Hospital, Sri Lanka, were equally divided into two groups. Both the groups were given some selected āyurvedic preparations internally. In addition, group 'A' was prescribed Sarjarasādi lepa (known as Dummālādi lepa in Sri Lanka) for external application. The results showed significant decline in severity of pain, fissuring, itching and eruptions after three weeks in group 'A'. Comparative analysis before and after three weeks in group 'A', showed 'p' values less than 0.05. The study revealed that the trial drug is an effective herbal cream in vipādika.

Key words: Vipādika, Sarjarasādi lepa

In āyurvedic classics the word kuṣṭha represents the disorders related to skin. According to the concept of tridoṣa, unhygienic and irregular dietary habits affect the normalcy of vāta, pitta and kapha. This in turn affects the skin and cause kuṣṭha or skin disorders.

Āyurveda has mentioned about 18 types of kuṣṭha under two category viz. mahākuṣṭha and kṣudrakuṣṭha. Vipādika is one among the kṣudrakuṣṭha, which is characterized by severe itching, intense pain and dryness of skin forming cracks in palms and soles.

According to the modern perspective, vipādika is an inflammatory skin disease that comes under the category of dermatitis. There are several types of dermatitis; and vipādika can be included under atopic dermatitis, meaning dermatitis due to atopic condition. In the morphological classification, it can be included in eczematous skin diseases or eczema. Atopic dermatitis has integrated under the L.20 in the XIIth chapter of International Classification of Diseases.

Western medical treatments do not provide satisfactory healing, which has made the patients

to move on to āyurveda. In this context, a study was conducted to evaluate the efficacy of Sarjarasādi lepa in vipādika.

Aims and objectives:- To find the efficacy of Sarjarasādi lepa in vipādika as a safe, effective and curative external mode of therapy without any side effects and affordable to the common man.

Materials and methods

Selection of patients:- 30 diagnosed cases of vipādika were randomly selected from the dermatology clinic, OP unit of Gampaha Wickramarachchi Ayurvedic Teaching Hospital, Sri Lanka. The patients were equally divided into two groups - A and B.

Inclusion criteria:- i) Patients with symptoms of vipādika; ii) under the age-group 15-65; iii) both sexes.

Exclusion criteria:- i) Patients with other skin diseases on feet and chronic diseases like diabetes mellitus; ii) age below 15 and above 65; iii) who are under western medical treatments.

Intervention:- The patients in group 'A' were given selected āyurvedic medicines internally and

administered the cream (Sarjarasādi lepa) externally. Group 'B' was prescribed internal āyurvedic medicines only.

Drug preparation

The trial drug was prepared according to the procedure mentioned in the Bhaiṣajyaratnāvali:

सर्जरससिन्धुसंभवगुडमधुमहिषाक्षगैरिकंसघृतम्।
सिक्थकमेतत्पक्रंपादस्फुटनापहंसिद्धम्॥

(भै.र., कुष्ठचिकित्सा, ५४/४०)

The ingredients of the formulation are shown below (Table 1).

Procedure: - The first five ingredients, crushed

Name of drug	Quantity
1. Sarjarasa (resin of <i>Shorea robusta</i>)	50 gm
2. Saindava lavaṇa (rock salt)	250 gm
3. Guḍa (jaggery)	250 gm
4. Guggulu (<i>Commiphora mukul</i>)	250 gm
5. Gairika (red ochre)	250 gm
6. Madhu (honey)	250 ml
7. Ghṛta (ghee)	250 ml
8. Bee wax	250 gm

separately and made into a fine powder form, were mixed together and Bee honey was added. After proper mixing, it was cooked added with a mixture of Ghee and Bee wax. After completion of the process, it was packed in 50g tubes and stored.

Treatment plan

Both the groups were given the following āyurvedic medicines internally for a period of 21 days:

- Paṭolakaṭukakaṣāya (120 ml) - twice a day (6.00 am /6.00 pm) before meals.
- Kaiśoraguggulu (250 mg) - twice a day (10.00 am /4.00 pm).
- Sukumāracūrṇa (5 g) - 9.00 pm with warm water.

In addition to the above, group 'A' was prescribed to apply Sarjarasādi lepa, twice a day, on the affected area after cleaning and drenching the foot.

Follow up was done after 21 days. Patients were strictly advised to follow the pathyāpathyas (regime of food and habits) and to avoid other treatments.

Assessment

Data were collected by interviewing and examining

the patients before and after the treatments. Assessment was done by observing the signs and symptoms recorded in the case proforma on the following parameters: i) pain, ii) fissuring, iii) itching and iv) eruptions.

The data were classified by giving scores according to their severity i.e. Nil - 00; Mild - 01; moderate - 02; moderately severe - 03; Severe - 04. The data were analyzed by using Minitab, SPSS 16 and Ms excel 2007 packages.

Results and discussion

Demographic data:- According to the research, it was observed that vipādika is mostly affected in patients between 26 and 35 years of age and females are more affected than males. Regarding prakṛti, it is seen that vāta-pitta prakṛti patients are mostly affected. Individuals with mixed dietary habits found more prone to the disease. Distribution of patients according to age, sex, prakṛti, etc. are shown in Table 2.

Pain:- In group 'A', no patient was reported with severe or moderately severe pain at the end of the follow up period. 20% of patients reported moderate pain; and 26.66% mild pain (Fig. 1). In group 'B', no patient reported with moderate and mild pain before the treatment. At the end of the

Description	% of patients
1. Age group (year)	
- 15-25	20
- 26-35	56.66
- 36-45	10
- 46-55	6.66
- 56-65	6.66
2. Sex	
- Male	80
- Female	20
3. Prakṛti	
- Vata-pitta	63.33
- Vata-kapha	13.33
- Kapha-pitta	23.33
4. Dietary habits	
- Vegetarian	23
- Mixed	77

follow up period, 50% of patients reported severe pain; 25% moderately severe and moderate pain (Fig. II).

Fissuring:- In group 'A', 13.33% of patients reported moderate fissuring; 33.33% mild fissuring and 53.33% no fissuring at the end of the follow up period (Fig. III). In group 'B', no mild fissuring reported before the treatment. At the end of the follow up period, 12.5% reported severe fissuring; 37.5% moderately severe fissuring; 25% moderate and mild fissuring (Fig. IV).

Itching:- At the end of the follow-up period, 26.66% of patients reported with moderate itching, 40% mild itching and 40% without itching in group 'A' (Fig. V). There were no patients with severe itching in group 'B' at the end of the follow up period. 62.5% reported moderately severe itching and 37.5% moderate itching (Fig. VI).

Eruptions:- In group 'A', 26.66% of patients

reported moderate eruptions, 33.33% mild eruptions and 40% no eruptions after the treatment (Fig. VII); whereas in Group 'B', 37.5% reported moderately severe eruptions, 50% moderate eruptions and 12.5% mild eruptions (Fig. VIII).

The above results corroborate the efficacy of Sarjarasādi lepa along with the selected āyurvedic medicines in the treatment of vipādika.

According to the data analysis by using SPSS 16 and MINITAB packages, a gradual variation of the frequency of symptoms in vipādika was observed.

Pain:- In group 'A', the 'P' value showed 0.145, 0.000 and 0.000 after 7 days, 14 days and 21 days respectively. Although group 'B' showed success in relation to pain after 7 days, as the P value was higher than 0.05 at the end of the follow up period, it is revealed that using selected āyurvedic medicines alone is not successful.

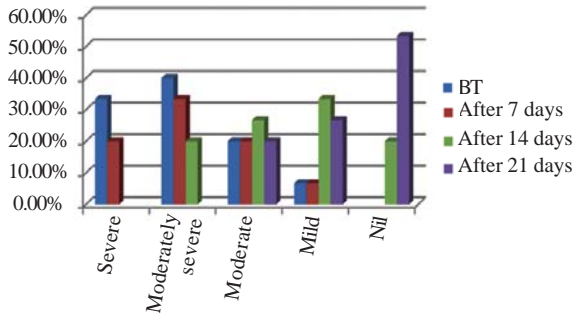


Fig. I. Variation of pain - Group 'A' (Selected āyurveda medicines and lepa)

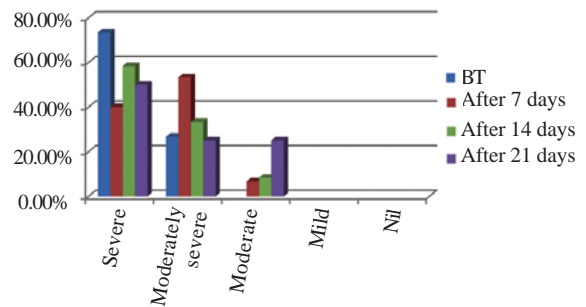


Fig. II. Variation of pain - Group 'B' (Selected āyurveda medicines only)

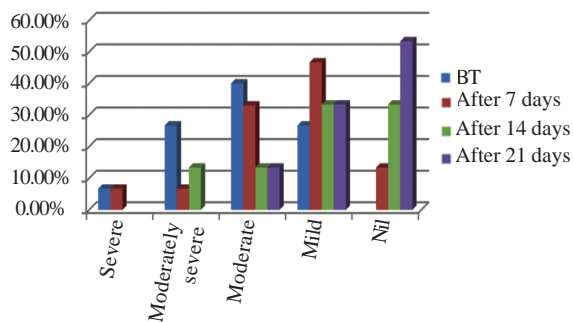


Fig. III. Variation of fissuring - Group 'A' (Selected āyurveda medicines and lepa)

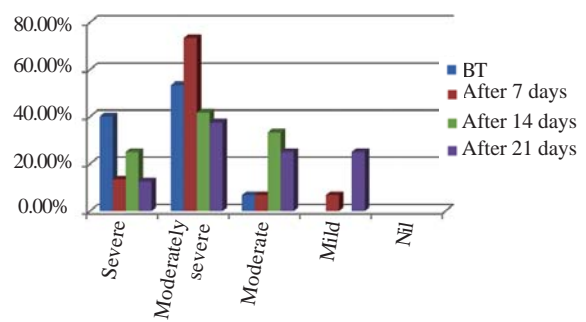


Fig. IV. Variation of fissuring - Group 'B' (Selected āyurveda medicines only)

Fissuring:- The ‘p’ value was lower than 0.05 in group ‘A’ at the end of second and third week. Whereas group ‘B’ showed success of decrease in fissuring at the end of the third week.

Itching:- Group ‘A’ showed ‘p’ value as 0.001, 0.000 and 0.000 after 7 days, 14 days and 21 days respectively. So it is realized that trial drug is effective in decreasing the itching as the ‘p’ value was lower than 0.05 at the end of the follow up period. Selected āyurvedic medicines had not contributed to get rid of itching as the ‘p’ value was higher than 0.05.

Eruptions:- A success of decrease in eruptions was shown in Group A at the end of the first, second and third weeks as the ‘P’ value showed less than 0.05; whereas in Group B the ‘P’ value was higher than 0.05.

It was noted that dietary habits and sātmya have a

significant role in relieving of the symptoms. According to āyurveda, vipādika is caused by vitiation of vāta and kapha. The skin exhibits intense pain, severe itching and eruptions. The ingredients of Sarjarasādi lepa have vedanāsthāpana, kuṣṭhaghna, kaṇḍūghna, vṛṇasōdhana, raktaśodhaka and vṛṇaropana properties. These qualities help to overcome the above mentioned symptoms.

Conclusion

It is concluded that Sarjarasādi lepa is effective in alleviating all the symptoms in vipādika. The formulation found to be more effective as an external mode of therapy to reduce the symptoms of vipādika.

Acknowledgment

The authors express their gratitude to: Dr. (Ms.). J.A.D.P.P. Jayakody, Senior Lecturer, Gampaha

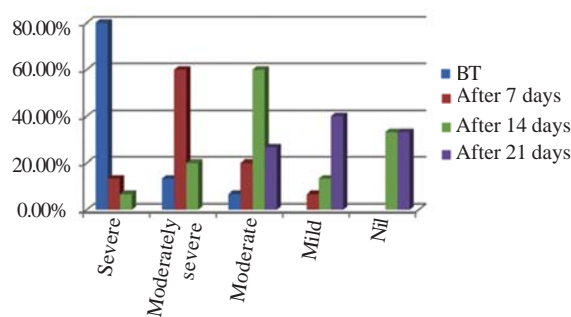


Fig. V. Variation of itching - Group ‘A’ (Selected āyurveda medicines and lepa)

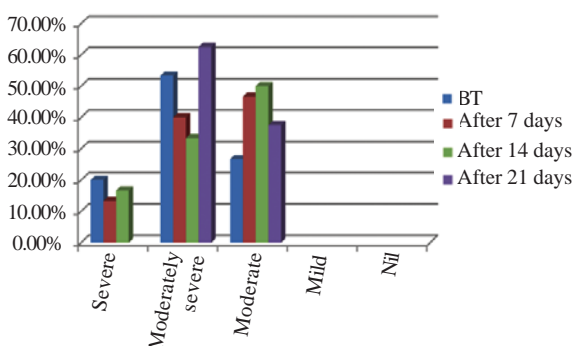


Fig. VI. Variation of itching - Group ‘B’ (Selected āyurveda medicines only)

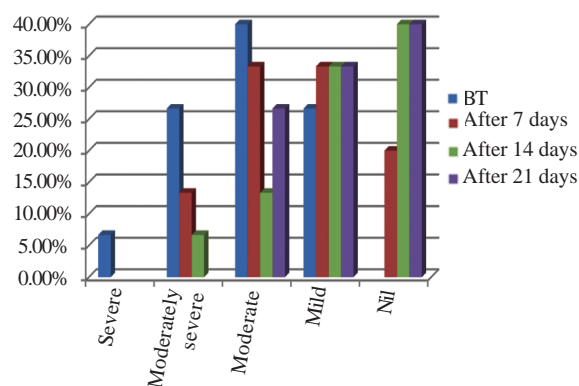


Fig. VII. Variation of eruptions - Group ‘A’ (Selected āyurveda medicines and lepa)

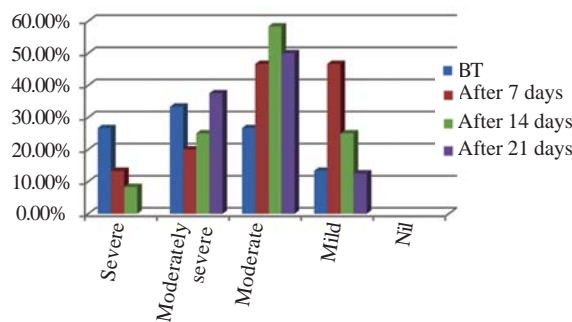


Fig. VIII. Variation of eruptions - Group ‘B’ (Selected āyurveda medicines only)

Wickramarachchi Ayurveda Institute, who encouraged us and had it not been her guidance this dissertation would not be realistic; Dr. (Mrs.) N. Gunarathne, Lecturer (Prob), Gampaha Wickramarachchi Ayurveda Institute who supported us in this research; All the staff members of the pharmacy of Gampaha Wickramarachchi Ayurveda Institute; Mr. M.N.M. Malsinghe, Ms. S.N.C. Sinharage who gave us unforgettable support during the work; Our colleagues who supported us in finding the patients.

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Kottakkal Ayurveda Series: 95**SCLERODERMA**

Essay adjudged best in
All India Ayurveda Essay Competition 2009

Bhushan A Sarmandal

Price: ₹ 80/-

The human body works by an incredibly complex array of biological interactions that are delicately balanced and closely linked. Similar to a healthy and functional society, the human body is dependent on each biological system to work properly and cooperate. Interaction among systems must work in a synchronized manner for normal operation of the whole system. A disease occurs when one or more of these biological systems are damaged or not fully functional. The symptoms of scleroderma are the manifestation of the disruption of specific biological pathways that are unique to this diseased. The mystery of the complex disease process causing scleroderma is rapidly being unravelled.



A case of neuropathy

Mahesh K.

ABSTRACT: Neuropathy can occur in every organ system, including the digestive tract, heart and sex organs. According to the National Institute of Neurological Disorders and Stroke about 60 to 70 percent of people with diabetes have some form of neuropathy, ranging from mild to severe. A case report of a 42 year-old male patient who was treated at Arya Vaidya Sala Hospital & Research Centre, Kottakkal is discussed here. The treatments were done as inpatient for about 30 days. Marked improvement in the symptoms was observed at the time of discharge.

Key word: Neuropathy

Neuropathy means damage to the nerves which transmit impulses from the spinal cord to the brain. Neuropathy is commonly known as peripheral neuropathy where 'peripheral' means beyond, 'neuro' means related to the nerves and 'pathy' means disease. Peripheral neuropathy (PN) is damage or disease affecting to nerves, which may impair the sensation, movement, gland or organ function, or other aspects of health depending on the type of nerve affected. It often causes numbness and tingling in the hands and feet. Physical injury or trauma to nerves, mostly results in neuropathy.

Āyurvedic perspective

Āyurveda considers neuropathy as a disorder due to vāta. Vāta is associated with the energy of wind and is responsible for activating the nervous system. Vāta controls some of the most fundamental processes in our body such as cell division, cardiac activities, excretion, etc. and is regarded as the most powerful and the only mobile doṣa. According to āyurvedic philosophy, vāta predominant persons are more susceptible to neurological conditions such as neuropathy, rheumatoid arthritis, cardio vascular diseases, anxiety and insomnia. Diabetic neuropathy is seen very particularly as an upadrava of madhumeha (diabetes).

Case presentation

A 42 year-old male patient from Abudhabi was

admitted at Ayurvedic Hospital & Research Centre, Arya Vaidya Sala, Kottakkal with complaints of loss of sensation in both lower limbs (esp. below the knee joints), difficulty in walking (unable to stand even with support), muscle wasting (b/l lower limbs). He was a known hypertensive as well as diabetic and was on medication.

The patient had a history of bike accident 23 years back and similar episodes of accidents at minor level had happened four times. Also, an inguinal hernia complaint for which he had underwent surgery about 20 years back.

Vitals:- Appetite - good; Bowels - clear and regular; Urine - normal; Sleep - sound.

Habits:- Cigarette smoking (about 20/day) since 27 years and alcohol consumption (about 500 ml/day) since 10 years.

Diet:- Mixed type and untimely; most of the time breakfast skipped and dinner was at late night.

Examination:- Conscious and oriented. Pulse rate - 98/min; BP-170/100 mm Hg; Knee jerk - b/l absent; Plantar - b/l flexor; CVS, RS and Abdomen - normal.

Investigation reports showed the following:

- MRI - L.S Spine - *Diffuse inter vertebral disc bulge at L3- L4, L4-L5 level causing narrowing of bilateral neural foramina.*

- USG Abdomen - *Mild hepatomegaly with fatty infiltration.*
- Nerve conduction study - *Severe sensorimotor peripheral neuropathy involving both lower and upper limbs, (L.L >U.L) predominantly demyelinating type.*
- Nerve Biopsy - *Chronic (asymmetrical) axonal neuropathy favouring a probable vasculitic neuropathy.*

Laboratory examinations:- i) FBS - 243 mg/dl; ii) SGOT - 45 mg/dl; iii) T. Cholesterol - 223 mg/dl; iv) Triglycerides - 110 mg/dl; v) SGPT - 68 mg/dl; vi) LDL - 160 mg/dl; vii) ESR - 74 mm/hr.

Treatments

1. Indukāntam kvātham - 2 tabs at 6am and 5pm
2. Dhānvantaram tailam (101) - 1 Caps. at 6 am and 5 pm.
3. Aśvagandhāriṣṭam - 30 ml twice daily after food
4. Suvarṇamuktādi guḷika - 1 no. at bed time
5. Guggulutiktakaghṛtam - 10 ml at bed time

The Chief Physician visited the patient and in view of diabetes and pain, prescribed Balāvairyādi kaṣāyam along with Indukāntam kaṣāyam and also advised to do peripheral stimulation for normalising the impulse transmission.

Revised diet:- Diabetic diet was prescribed and advised to maintain the time schedule (Table 1).

Śudhabala tailam was prescribed for application over head and Balāśvagandhādi tailam for body.

The other treatments performed include: udvartanam, upanāham, navarakkizhi (in Daśamūla kaṣāya), physiotherapy and peripheral stimulation.

Result

The patient was discharged after 30 days' treatment. Loss of sensation in bilateral foreleg found to be improved about 90-95% and in bilateral foot about 40%. Patient was able to stand with support for about 20 minutes. Muscle wasting in the lower limbs markedly improved. Fasting Blood Sugar reduced to 162 mg/dl.

At the time of discharge, the following medicines were prescribed:

1. Indukāntam kaṣāyam + Balāvairyādi kaṣāyam - 15 ml along with 60 ml lukewarm water at 6 am and 5 pm.
2. Dhānvantaram (101) - 1 Capsule at 6 am and 5 pm
3. Aśvagandhāriṣṭam - 30 ml twice daily after food
4. Suvarṇamuktādi guḷika - 1 No. twice daily after food
5. Guggulutiktakaghṛtam - 10 ml at bedtime
6. Mānasamitraṇṭakam - 1 tab at bedtime

TABLE 1
Diabetic diet and schedule

Time	Description
7.00 am to 7.30 am	- Cucumber juice + Vilvapatra juice - 100 ml
8.00 am - 8.30 am	Breakfast - Puṭṭu/doṣa/upmā/kañji (porridge), etc. (made of ragi/barley/corn/little millet). 150 gm / 2 nos + vegetable curry/chutney - 1 catorie (bowl) + pappaya/guava/apple - 4/5 pieces
11.30 am to 1.00 pm	Lunch - Green salad - 1 plate + rice - 1 bowl or whole-wheat chapatti - 2 + vegetable dish - 3 catories. Boiled butter milk or pepper rasam - 150ml + Roasted pappad - 1 + Pickle without red chilli.
3.30 pm to 4.30 pm	- Vegetable soup - 200 ml
7.00 pm	Dinner - Boiled / steamed vegetable - 1 bowl/plate + Chapathi - 1 no / pālkañji (milk porridge) - 1 bowl (made of ragi, corn, barley, broken green gram) + vegetable curry - 1 catorie

7. Śudhabalātailam for head and Balāśvagan dhādi tailam for body to be applied before bath.

Discussion

Samprāpti:- Doṣas involved - vāta, pitta and kapha; Dūṣya - rasa, rakta, māmsa, meda, majja, śukra and ojas; Agni - jaṭharāgni, bhūtāgni and dhātvagni; Āma - in dhātu level.

In this case, the vitiated kapha, pitta and dhātus caused āvaraṇa to vātadoṣa. So, the calatva of vātadoṣa was diminished due to obstruction, causing ceṣṭhāhāni or vimārgagamana of it. This resulted in loss of motor or sensory functions which is the karma of vāta. It also produced different symptoms according to anubandha doṣa/dūṣya such as supti, gaurava, śaitya that are kaphānubandha; and dāha, toda, etc., which are pittānubandha.

Sensory symptoms like dāha and supti are explained as prameha pūrvarūpa in Carakasamhita. Motor symptoms like soṣa, daurbalya, stambha and kampa are explained as prameha uapdrava in Aṣṭāṅgahṛdaya, Carakasamhita and Suśruta-samhita. Considering kaphānubandha and

prameha, rūkṣana was given initially in the form of 15 days' udvartana. Later, the patient developed severe pain in his lower limbs; numbness and loss of sensation were almost subsided and he was able to move his legs; this showed kaphānubandhata relieved and vāta dominating. So, bṛmhaṇacikitsa (navarakkizhi in Daśamūlakvātham) was started which gave a remarkable recovery from the symptoms.

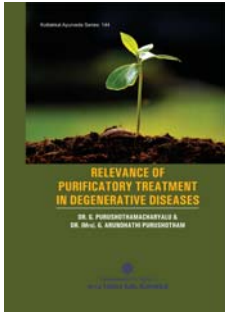
Conclusion

In this case all the doṣas were involved in the disease manifestation. The prime aim was to make the patient devoid of the āvaraṇa caused by kapha pitta doṣas. Later on it was treated as a kevalavātavyādhi. Correcting the agni was also taken under care and accordingly the diet pattern was scheduled. All these resulted in marked improvement. Āyurvedic treatments are of a good choice in this particular condition.

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Kottakkal Ayurveda Series: 144



Relevance of purificatory treatment in degenerative diseases

Essay adjudged best in All India Ayurveda Essay Competition 1992

Dr. G. Purushothamacharyalu and

Dr. (Mrs.) G. Arundhathi Purushotham

Price: ₹ 160/-

The diseases which are related to or caused by the process of degeneration are termed as degenerative diseases; it is regarded as a form of cellular injury. Degenerations are named according to the morphologic change or the nature of the abnormality accumulated material i.e. cellular swelling (cloudy swelling), hydropic, etc. The process of degeneration is regarded as a physiological phenomenon in old age. However, people in younger age also afflicted with the process and suffer from various types of degenerative diseases. The most important and prevalent degenerative process of degeneration is atherosclerosis which is the usual cause of ischaemic heart disease, stroke. The therapies described by Caraka for this dhātuśaithilya is rasāyanacikitsa. This title discusses the relevance of purificatory treatments i.e. śodhana or pañcakarmacikitsa as the most important mode of therapeutic measure in degenerative diseases.



RENAL DISEASES

Renal diseases pose a great challenge today and it puts enormous burden on our health care systems. Globally, Chronic Kidney Disease (CKD) is the 12th leading cause of death and 17th leading cause of disability. The commonest cause of CKD is diabetic nephropathy. Early detection is the first step in treating kidney diseases. But it is found asymptomatic in the beginning and when it starts exhibiting the symptoms, kidney damage may exceed more than 70%. Āyurveda has categorized renal diseases under mūtrāghāta (when there is painful or difficulty in micturition) or prameha (when there is excessive micturition), depending upon the stages of the disease. The vasti marma, mūtravaha srotas and the dhātus like rasa, rakta and medas are affected here. Kṣedakakapha, apānavāyu and pācakupitta play an important role in the samprāpti. The disease progresses as a kaphajavikāra, causing obstruction and then as a pittajavikāra, causing infection and finally ends as a vātajavikāra, the stage of complete deterioration. Śodhana followed by śamana and rasāyana according to the patient's condition helps in the effective management of the disease.

The 52nd Āyurveda seminar of Kottakkal Arya Vaidya Sala held on 11th October 2015 focused on this topic. Dr. Sreenivasa Acarya presented the key paper. Papers by Dr. Ramdas Pisharody, Dr. K. Murali and Dr. C.D. Sahadevan followed. Dr. K.G. Viswanathan, summing up the papers, led the discussion.

An abstract of the papers are given in these pages. Arya Vaidya Sala will publish the full text later.

Dr. Sreenivasa Acharya
Dr. Ramdas Pisharody
Dr. K. Murali
Dr. C.D. Sahadevan
Dr. K. G. Viswanathan



The scope of āyurvedic principles and practices in managing renal diseases - A general perspective

Sreenivasa Acharya

When a person suffers from a disease which is related to a particular organ it doesn't mean that the disease is confined to that particular organ. In āyurveda renal diseases are explained as diseases which are mainly related to the vasti and also organs like guda, vṛṣaṇa, pāyu, etc. partially. So when the vasti is affected a person is likely to have the symptoms of these also i.e. when a person is suffering from mūtrāghāta, he is likely to have constipation and associated symptoms as the structure is very much related to vasti which is present in the gudāsthi.

Vasti is one among the 'trimarma', the three vital points, which shows its importance. It is an organ which collects urine from different minute structures, stores and excretes it. Due to the dietary habits and life style, the morbidity of doṣa is likely to involve the vasti and the person suffers from the diseases related to vasti where the urine is affected. It includes excessive passing, inadequate passing or painful passing. It is categorized into 40 varieties of diseases i.e. two groups containing twenty elements; first group containing those where excessive urination is present and another group where painful or difficult urination is present. The one with difficulty in micturition or painful micturition comes under the mūtrāghāta and the other with excessive micturition is termed as prameha.

Classification of prameha

A. i) Sahaja - Inherited from parents; due to less food intake the patient will be lean; ii) apathyānimitaja - due to erroneous food habits the patient will be very healthy in the beginning but later on he becomes emaciated.

B. i) Dhātukṣayaja - It is related to sahaja; ii) āvaraṇaja - Excessive consumption of food results in santarpaṇajanidāna and later on the vikāra is termed āvaraṇaja.

C. i) Pūrvarūpasahita prameha - It is associated with pre-existing premonitory symptoms. Excessive morbidity of medodhātu is present. Prognosis is yāpya; ii) pūrvarūparahita prameha - It is not associated with premonitory symptoms. Medodhātu involvement is not so apparent. The Prognosis may be sādhyā.

In the primary stage due to the food habits kapha doṣa gets vitiated. This has got affinity towards the medas and combines with it in a pathological sequel. This excessive medas formed in the body circulates in rasa and raktavahasrotas which is also considered as abadha medas and is referred as ṣoṇitābhiṣyandana. When this ṣoṇitābhiṣyandana is present, probably the conglomeration of kaphadoṣa and medas may lead to a series of pathological steps, finally culminating in the manifestation of prameha. This is how the particular kapha and medas are involved.

In the later stages kapha and medas also have a pathologic interaction with mūtra/kḷeda in the body and also with the māmsadhātu which results in the formation of premeha piḍakās. If kapha and medas afflict the srotas in the mouth of vasti the person will suffer from prameha with excessive production of urine. This is the case with a predominant premonitory symptom. The sequence of samprāpti is: śleṣma-medo-samsarga → śleṣma-meda-duṣya samsarga → śarīrakḷeda-dūṣaṇāt → prameha.

In the absence of the premonitory symptoms if

we take the samprāpti, the first two stages will not be present. In the third stage the vitiated doṣa directly involves the vasti itself i.e. ‘śarīrakṣeda dūṣaṇāt’ and the patient will suffer from prameha. In the first type, the medas is directly involved. So it is difficult to cure. But in the second type as the medas is not directly involved, it is easy to cure i.e. compared to “medo yadi praduṣtam’, ‘medo yadi na praduṣtam’ is easy to cure.

From the above mentioned things we can categorise prameha into two; the first category is the metabolic disorder. Few years back prameha was considered as an abnormality of the carbohydrate metabolism. But presently it is taken only for the diagnosis which is based on the presence of carbohydrate in the body, as the basic pathology is considered to be the metabolism of fat which is clearly mentioned in the samprāpti of prameha ‘medo yadi praduṣtam’.

Second category is related to nephropathy or the chronic kidney disorder; usually considered as mūtrāghāta. But it has to be considered as the prameha as in the patient with CKD the leading presentation is excessive urination. Inadequate urination is seen only in the last stage due to the major cause of the illness which may require dialysis and it needs to be considered as a variety of prameha itself. Thus CKD can be included among the twenty varieties of prameha. The particular affinity between kapha, medas and urine in both DM and CKD is highly relevant. In DM the involvement of fat is in the early stages but in CKD it is in the later stages.

When we speak about the vimśati prameha there prevails some difference of opinion i.e. whether we have to consider madhumeha as DM or prameha as DM. Here the literature says:

कालेनोपेक्षित सर्वे..... मधुमेहताम्। (अ.ह.नि.)

The kaphaja and pittaja prameha are ignored or if the patient does not show any desired response it is considered as yāpya/asādhyā/pratyākhyeya depending on the symptoms of the patient. After 15-20 years the patient suffering from kaphaja / pittaja prameha will end up in madhumeha. Literature says that in prameha the abnormality

of madhurarasa is found which point towards ojoyyāpat as ojas is directly related to sweetness. So not only the urine and blood, the whole body will be sweet in diabetes. Thus all the varieties of prameha can be called as madhumeha or DM.

As the immunity of the diabetic patient is getting hampered, he is more prone to infections like UTI, prameha piḍikas (diabetic carbuncles) etc., where the general symptoms will be absent. Thus if a diabetic is getting MI, he will not have any chest pain which is termed as silent MI.

In the early stages, food restriction will be sufficient to control the glucose level (1-2 years). It may require a single drug therapy (3-10 years). After 5 years it may require a three drug therapy and after 15-20 years insulin must be given. This is the normal course. Thus there will be involvement of multiple systems in the body and may result in ischemic lung disease, ischemic heart disease, diabetic neuropathy, etc. One of the major sequel of CKD is renal damage. Accordingly there are 20 varieties of prameha:

1. Udakameha: The normal yellow colour of urine is lost as hyperglycemia causes osmotic diuresis.
2. Ikṣuvālikāmeha: The urine will contain micro albuminuria.
3. Sāndrameha: Following microalbuminuria, the GFR declines. Urine becomes frothy and turbid. Investigation reveals prominent albuminuria.
4. Sāndraprasādameha: In this condition a clear separation of the supernatant fluid and lower deposits can be observed if it is kept for some time.
5. Piṣṭameha/ṣukḷameha: Referred as chyluria where chyle from small intestine to renal pelvis may be present.
6. Śukrameha: It refers to prostatitis. Here the prostatic and seminal fluid will mix up with the urine.
7. Śītameha: In śītameha the urine will have a normal amber colour as a result of glycosuria and polyuria.
8. Sikatāmeha: It refers to crystaluria where the

- urine consists of crystalline precipitates.
9. Śanairmeḥa: Diabetes is related to different neuropathies especially with the involvement of ANS, termed as dysautonomia which produces distention of bladder there by producing painful micturition, reduced stream of urine and increased frequency. This is referred as śanairmeḥa.
 10. Alālamēḥa: In alālamēḥa lipoproteins and mucous in urine shows some thready parts.
 11. Kṣāramēḥa: Bleeding is the manifestation of glomerular damage. In case of infection like the nephrites, there will be bleeding in urinary tract and if the urine is acidic the hemoglobin breaks and gives the typical colour of kṣāra.
 12. Kālamēḥa: In acidic urine if the amount of bleeding is more, large amount of hemoglobin is broken down and the urine becomes blackish in colour, which is referred as kālamēḥa.
 13. Nīlamēḥa: Urine will have a typical blue colour especially in case of pseudomonas infection.
 14. Raktamēḥa: Urine will have red colour due to bleeding from the lower part of the urinary tract.
 15. Mañjiṣṭhamēḥa: Here hemoglobin and urea develops. Breaking down of RBC occurs. The infection precipitates bleeding.
 16. Hāridramēḥa: Pyogenic infection is not uncommon. If the infection process frank pus, this causes pyuria which gives the presentation of hāridramēḥa.
 17. Vaśāmēḥa: In a patient suffering from diabetic nephropathy the lipids may be seen as fat globules in urine, which is named as vaśāmēḥa.
 18. Majjamēḥa: In case of nephropathy with infection, lipids make urine appear greasy. Later on hemorrhage adds to the pathology and the urine appears like majjamēḥa.
 19. Hastimēḥa: In a patient of śanairmeḥa, if the pathology continues the patient may be unable to control urination. Urine will dribble always which appear like lasīkā due to the lipoproteins in it, which is called hastimēḥa.

20. Madhumēḥa: In all the twenty varieties of prameḥa the taste of urine is madhura, which for the first time turns into kaṣāya in madhumēḥa. Here the term madhumēḥa is ascribed because of the colour and appearance.

In madhumēḥa ojas which is madhura in taste is involved. The hyperglycemia will finally result in ketoacidosis and ketonuria gives this particular appearance to urine.

Thus in the first phase it is commonly uncomplicated DM where the colour of urine is normal or whitish, is named as kaphajaprameḥa. Pittaja prameḥa is characterized by abnormal discolorations like bluish, reddish, etc. because of the bleeding associated with the infective phases. Third phase is vātajā prameḥa characterized by alteration in glomerular filtration resulting in nephropathy.

Management of prameḥa

The general treatment list includes śodhana, śamana, bṛmhaṇa and rasāyana cikitsa. Generally prameḥa is considered as a bahudoṣāvastha illness, so if it is diagnosed, from day one, it is best to treat with samśodhana treatments like i) punaḥśodhana, ii) kramataḥ śodhana, iii) nityaśodhana, iv) sādhyāśodhana and v) ubhayaśodhana.

As prameḥa is considered as yāpya, punḥśodhana can be the best choice. Literature says that vamaṇa can be repeated once in 15 days and virechana in 30 days. If the patient is suffering from santarpanajā prameḥa, śodhana can be given at least twice a year. Among kāyaśodhana we have vamaṇa, virecana and vasti. But vasti is contraindicated in prameḥa. So we can opt either vamaṇa or virecana. Vamaṇa is not ideal in patients who are obese or over weight. So virecana is the best choice. Thus the following sequence can be followed: Rūkṣaṇa → dīpanapācana → snehapāna → snigdha-svedana → virecana → sam-sarjana.

As kapha and medas are involved, rūkṣaṇa is essential for which maṇḍa prepared out of yava/ barley can be given for 5 to 7 days. Even Triphalācūrṇa can also be given. For dīpanapācana, Citrakādi vaṭi can be used. Īsat snehapāna, which is anabhiṣyandi in nature, is most ideal in prameḥa

as the disease is santarpanōtha, where kapha and medas are involved. It can be given in madhyamamātra i.e. which digests in 12 hours. Guggulutiktakaghṛtam is a good choice here. Once snehapāna is over, snigdha abhyaṅga followed by svedana or snigdha udvartana have to be done followed by virecana. 40 to 50 gms of Tṛvṛt leha is ideal in prameha. This should be followed by samsarjanakrama, peyādi krama or tarpaṇādi krama according to the nature of śodhana.

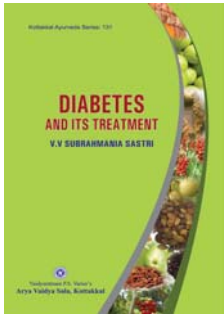
Once samsarjana is over, rasāyanacikitsa can be given. For this śilājaturasāyana is a good choice. 48 gms of śilājaturasāyana can be given for a

period of about 45 days which is mentioned in texts as the largest dosage. As a small dosage 12 grams can be given for 15 days. Even Guggulu rasāyana, Bhārgavaprokta rasāyana can be tried. After the rasāyanacikitsa the patient should be given preparations like kaṣāya, guḷika, etc. If the patient is weak, may require some bṛmhaṇa cikitsa. This is how the treatment should be followed in case of CKD, DM and also the diseases of the

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Kottakkal Ayurveda Series: 131



DIABETES AND ITS TREATMENT

*Essay adjudged best in
All India Ayurveda Essay Competition 1976*

V.V. Subrahmanya Sastri

Price: ₹ 80/-

Traditionally, madhumeha is equated with diabetes mellitus. Madhumeha is a disease in which certain pathological changes in urine are noticed, the most important being the presence of sugar. Since this disease is connected with the urinary system with the presence of sugar in the urine, the equation of madhumeha with diabetes mellitus is justifiable. There are two schools of thought regarding the development of this disease. Caraka considers this as one of the verities of vātaja pramehas whereas according to Suśruta all types of prameha, not properly treated and attended to at the outset, may ultimately develop into madhumeha types, which are incurable. It is a recognized fact that diabetes mellitus is a consequence of deficiency of insulin. But āyurveda does not indicate any substance being produced as insulin and also the effects of its deficiency in the body to be grouped as madhumeha. The basic doctrines of āyurveda revolve round the concepts of nutritionology. Therefore, this ancient medical science has devoted much space for the digestion and metabolism of the ingested food.



Glimpses of renal medicine - current trends and future perspectives

Ramdas Pisharody

Modern medicine is developing in such a way that the classified things are getting smaller and smaller. Long ago āyurveda ācāryas had been trying to conserve it. But at the same time division is also very important. For eg: We can't put all the Chronic Kidney Diseases under Diabetes. In ancient times there were many limitations as our manuscripts were written in Sanskrit. In Ṛgveda things related to health is mentioned. Nobody thought about health till that time because all wanted food just for survival. Nobody was bothered about death. We should give much tribute to these sages; like Suśruta - the surgeon and Caraka the physician. They were very enthusiastic with the anatomy and physiology of the body. In those days there were no labs or gadgetry. They just used to see the taste of urine and other secretions of the body. But now we have many gadgets to depend on. So lab is very important. In the present day world, a lot can be learnt from community medicine. They found out that both Diabetes Mellitus and Hypertension are the major killers and are pone a threat to the entire world.

Renal diseases

The structures like glomerulus, tubules which reabsorb and secrete the fluid and the blood vessels that take it away are the three which get affected in a kidney disease. Renal diseases can be of two types; acute and chronic. Acute kidney disease is either produced by sudden loss of blood (Ischemia), blood flow being low or it could be due to toxins. Chronic kidney diseases are large group of disorders. Diabetes mellitus and hypertension are only two of them.

Acute Tubular Necrosis: - Following an Ischemic injury, PPH, APH, etc. the blood loss here will

come up with HTN and the first thing to shut down will be the kidneys. Secondly, it may be due to toxins including modern medicines which may even produce notorious toxic injuries for which we should not blame the other systems of medicine. Acute glomerulonephritis is very common in children, following some skin/throat infection. Interstitial nephritis is large group of disorders where most of them are allergic and thereby shuts down the kidneys.

If we compare among the nations, India is very progressive in the form of degenerative diseases. We have many chronic kidney diseases, chronic glomerulopathies which indicate that our own body is acting as an enemy. We also have tubulo interstitial disorders. Children can be afflicted with reflex syndrome, where urine goes back to the kidneys which may result in CKDs even the cases of obstructive nephropathy is also common.

India, which is going to be the capital of diabetes all over the world. DM and HTN are the major killers as far as the kidney diseases are concerned. So we have to work together on the preventive aspects of these disorders. Kerala is the capital of India as far as the Diabetic mellitus and hypertension are concerned and the demographic transition which has happened here has made the life expectancy for a female to 77 and for a male it is 73 or 74. Unfortunately unlike the communicable diseases, these diseases are difficult to cure and very expensive to treat. The savings of a middle class person has to be spent on saving his own life.

A survey done 5-10 years ago showed 10% of Diabetes mellitus are type II diabetes. In urban area it is 22%. 10-20% of them develop Diabetic

Nephropathy, 80% of the CKD have CVD. So even before they reach for dialysis they will die of heart disease. 60% may have retinopathy, 15- 20% have peripheral vascular diseases and 20-25% have neuropathy, among them 50% have diabetic foot.

What causes diabetic nephropathy? It is because of simple hemodynamic changes in the micro vasculature of the kidney due to the systemic blood pressure and the glycemc status of the patient. If we look at a typical glomerular nephropathy it looks like a complete loss of capillary structure. There is a stage of microalbuminuria which is 30-300. When it is 300, it not only signals kidney injury, it also point towards a complex cardio vascular events.

So now the objectives of the treatment in diabetes are:

- Reversal of microalbuminuria
- Prevent progression to overt nephropathy
- Reduce rate of reduction of GFR and postpone ESRD.
- Prevent cardio vascular diseases.

In diabetic nephropathy apart from glycemc control, the blood pressure should be kept less than 130/80 mm Hg. Glycemc control ofcourse is important. Studies have clearly shown that diabetic control will definitely reverse not in the late stage but up to stage III in CKD.

By controlling hypertension we can prevent one death for every 11 patient as hypertension alone can cause conditions like malignant nephrosclerosis. Even without using any drugs, dietary restrictions alone can control hypertension. In Kerala the minimum salt consumption is 12 gm/day which is double the quantity of the actual need.

BP Classification	SBP (in mmHg)	DBP (in mmHg)
1. Normal	< 120	<80
2. Pre Hypertension	120-139	80-89
3. Stage 1 Hypertension	140-159	90-99
4. Stage 2 Hypertension	< 160	>100

This quantity is required only for the amphibian fishes. If left unchecked it may invite many metabolic disorders.

Renal transplantation is the method of cure which is now progressing very fast. CAPD (Continuous Ambulatory Peritoneal Dialysis) happens throughout the day at home or at work without breaking one's routine life. Here one's own peritoneal membrane acts as an exchange medium whereas in hemodialysis diffusion is through an artificial circuit. One is institution based and the other home based. Even though both the techniques are having problems, the life expectancy of people on dialysis with diabetes has come up from one year to five years and non-diabetics live for 10 years.

We have best survivals following a live donor transplantation where we can expect a 98% of 2 years survival, 95% of 5 years survival, 85% of 10 to 15years survival. But it may not be present with a diseased donor especially from diabetic family. Even if the total outcome may not be that good in the initial stages, the quality of life can be better maintained. About 381 organ transplants have been successfully completed now.

Heredity definitely plays a vital role in diabetes as 50% are prediabetic if both parents are diabetic. The cause is genetic polymorphism. Later came the urban life style where fast food and other things lead to DM, HTN, Atherosclerosis, etc.

If we go into the cell biology where we are looking into the compartments of the cell not only the nucleus, cytoplasm, etc., intercellular trafficking chemicals are also there. Proteins are the structural enzymes which in turn produces metabolites. So if the protein is abnormal, metabolite will be abnormal and may create a diseased condition. All this is controlled by the genes. This gives importance to genetic engineering, gene therapy, etc. These advances in the science are a leap in its development. Even reproduction is made possible in laboratories through cloning.

Now we are transplanting antillogous stem cell where we extract stem cell from one's own cell. These are used to replace the stem cells that have

been damaged by high dose of chemotherapy, which is also used to treat the persons underlying disease. Now we know that we can make alpha, beta, gamma, delta type of cells in culture. It is sure that within 5 years doctors may be able to cure diabetes especially the Type I.

Āyurveda always preaches about regenerative medicine. Unfortunately modern medicine does the repair which produces fibrosis or disability or problem elsewhere. Regeneration, if we can achieve, probably it is the best. But unfortunately everything cannot be regenerated. The first system that regenerated in cultures was the kidney. And the next thing to come is the treatment for Multiple sclerosis which is a devastating disease of the neurological circles where the neuron is to be grown and replaced. This is what medicine is today. All

common treatments have 20 to 60% efficacy only and they lead to problems and adverse effects. Genetic manipulation of fungi, e-coli and small bacteria are done for antibiotics. We can make recombinant purified hormones. Targeted therapy is done with various antibiotics especially in cancer where we can identify the genetic signature and choose the optimum drugs to target it.

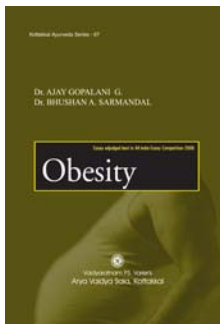
So let us all get together and bring down Caraka's theories and incorporate it with modern medicine, genomics and informatics (analyze using computer) as human brain is insufficient sometimes.

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OBESITY

Essay adjudged best in
All India Ayurveda Essay Competition 2006

Gopalani Ajay G. & Bhushan A Sarmandal

Price: ₹ 80/-

Obesity is a condition in which physiological equilibrium is disturbed due to the abnormalities in the functioning of the various body systems. This provides a platform for many ailments such as hypertension, diabetes mellitus, coronary heart disease, osteo-arthritis, infertility, impotency and psychological disorders like anxiety, depression, etc. Thus the mortality and morbidity rates are more in obese persons. This book provides a clear picture on the various aspects of obesity including its etiology, pathogenesis, clinical features and management.



Renal diseases - An āyurvedic approach

K. Murali

A disease mentioned in a particular stream of medicine is difficult to be explained with another system as there are certain limitations and restrictions. It is as difficult as the transformation of a word from one language to another. Modern medicine is having an organ based approach while āyurveda is based on the tridoṣa sidhānta, which is derived from the unification of different organs. So the questions of comparison do not arise. As the society is fed by the concepts of the modern medicine by the medias, we are forced to make a comparative study.

We can approach 'renal disease' in the light of mūtravahaśrotogata vyādhis. Vṛkkas are considered as organs related with the medodhātu. Āḍhamalla who wrote commentary for Śārṅga-dharasamhita considered them as the centres carrying the watery portion of the food. Now a day we can consider vṛkka as the mūlasthāna of the mūtravaha śrotas.

In the Vedic period 'gāvini' were named as ureters. But later in samhitas it is named as vaṅkṣaṇa. In āyurveda, lateral portion of uras is termed as pārśva and the inguinal region as vaṅkṣaṇa. But it is better to consider the lateral portion below uras as vaṅkṣaṇa. Yoni sometimes is taken not only as the particular organ but as the whole organ system. Similarly the term vasti at many times refer to the whole organ system.

'Mehana' is the organ of micturition. Caraka has mentioned it as 'prāṇāyatana' as it is responsible for the sustenance of life. In Trimarmīya adhyāya, vasti is considered as a marma. It also comes under the category of daśajīvitadhāma, sadyoghna marma, etc. Human body is a combination of doṣa, dhātu and mala. Tridoṣas, the energetic principles

govern physiological and psychological functions of the body. Dhātus possess specific consistency and functions. Malas are the waste end product of the metabolism. They stay in the body for a definite period and so are the functions. Thus we have to consider all organs as a combination of doṣa, dhātu and mala but predominantly the dhātus. Thus when we think about various aspects of human body we have to assess them in terms of doṣa, dhātu and mala.

If we take the mūtravahaśrotas, apānavāyu expels the mūtra, mala, śukla and garbha and vyānavāyu with the mobility is equally important. Rasa and rakta dhātus are more dominant here. They are the dravarūpa dhātus that are more related to the mūtra which is also dravarūpa. Dravatva is one among the vimśati guṇas. Its kāraṇa is 'yasya alolane śakti: sa drava' - dissolubility i.e. it is the ability to make other matters to get dissolved. Thus dravatva is not only liquidity. Even though mūtra is considered as a mala which appears after the āhārapariṇāma it is not coming through the rectum. It is travelling through a different channel to perform a particular function i.e. 'mūtrasya kṣedavāhanam' of not only the āhāramala, but it also acts as a medium of expulsion of the 'kṣeda' from the body.

Even though waste materials of the metabolism are mentioned as nakha, roma, etc. there are many malas in the subtle form which have to be considered as kṣeda. This kṣeda is made soluble in mūtra and is expelled. As per ācārya Hārīta, the properties of mūtra includes anāvilam, viśadam, uṣṇam, tīkṣṇam, akṣam and kṣāram. The pramāṇa or quantity should be four añjali. According to Kāśyapa micturition should be

anavidham, atanugam, r̥ju, etc. All these findings have to be incorporated while examining a patient.

Looking into the nidāna, we can see that tridoṣas play a vital role in mūtravaha śrotas i.e. vāta gives the movement, kledatva is related with kapha and uṣṇa-tīkṣṇa nature is related to pitta. Apart from this, the causatives have a common apatarpaṇa nature and also there will be a disorientation of the vyāna and apānavāta. The other common causative factors include intake of amūtraḷa drugs like mustard, sesame, cashew, etc.; prolonged practice of tṛṣṇānigraha can hamper mūtravahaśrotas. Mūtravegarodha or suppression of micturition is also a cause. Rūkṣāhārasevana and āyāsa can also generate mūtravahaśrotovikāras. Chidravaiguṇya or structural deformity can be a cause for diseases like mūtrasaṅga. In diabetic patients if apatarpaṇa is done more, it can lead to disorders of mūtravahaśrotas. Dūṣiṅga or abhigāta can be taken as āgantuja nidānas.

If go to the samprāpti it can find that tridoṣas are hampered. It is taken as a madhyamarogavyādhi. Mūtrakṣayalakṣaṇas can also be found here. Śrotoduṣṭilakṣaṇas like atipravṛti, saṅga, sirāgranthi and vimārgagamana can be seen here; i.e. excessive urination or atipravṛti here denotes kṣaya of mala. Disorders like aśmari, granthi, etc. cause saṅga or obstruction. Vitvighāta, where the urine smells like faeces, implies the vimārgagamanam. Thus all the śrotoduṣṭi lakṣaṇas appear in the samprāpti.

Diseases related to mūtravahaśrotas

Mūtrakṣaya, uṣṇavāta, mūtrasāda, mūtrakṛcchra, etc. are disorders where the quantity of urine is less. In aśmari, śuklāśmari, mūtragranthi, mūtrotsaṅga, etc., obstruction is the peculiar feature. Here urine is formed but expulsion is restricted. Vitvighāta, vātavasti, vātāṣṭhila, mūtrakuṇḍalika, mūtrātita are the conditions due to the pratiloma gati of vāyu. Apart from this, vṛkkaṣ are highly prone to be affected with vidradhi. Vasti is considered as the seat of gulma. These disorders should be ruled out through proper examination of the patient.

If thoroughly examine the patient we can classify the symptoms as mūtrakṣayalakṣaṇas, śrotoduṣṭi-

lakṣaṇas like atisṛṣṭam, prakupitam, alpālpam, abhīṣṇam, bahaḷam, i.e. excessive urination, viscous urine with painful excretion, minimum excretion, increased frequency, urine with different salts or other toxins, etc. Likewise if analyze urine, can find out the difference in colour, odour, etc. Accordingly we have to conclude the doṣic involvement in that particular patient. Different modes of pain, swelling, distention, etc. indicate vātavaiguṇya, jvara indicates pittādhikya and arocakādi lakṣaṇas point towards kaphādhikya. Detailed explanations are there in the literatures and these are to be utilized in our daily practice.

Management of the disease

Being a madhyamarogamārga vyādhi, koṣṭha is not much involved and it is much difficult to bring the doṣas back to the koṣṭha. Thus śamanacikitsa is given the prime importance. In order to avoid the recurrence, śodhanacikitsa or rasāyanacikitsa can be given. By clubbing all these things the author has formulated 24 types of treatment methodologies in these disorders. A few of them are explained here.

Snehana and svedana definitely play a major role in bringing the vātānulomana. Here more importance is given to bāhyasnehana like abhyaṅga. Avapīḍakasneha plays a vital role as it is particularly mentioned for mūtravahaśrotovikāras. In case of svedana, localised treatments like avagāhasveda will be more effective. If we want to perform a śodhana, vasti can be practiced. Uttaravasti which is not much tīkṣṇa in nature is a good choice here. Peya, toyapāka, takra are also useful. Peya mentioned in jvaracikitsa can be made use of. Toya prepared out of Bṛhatyādi gaṇa, Ardhavilvam, etc. is found very effective. Dr. Haridasan (Retd. Principal VPSV Āyurveda College) in his studies has found that Bṛhatyādi gaṇa in the form of toya is more effective than kvātha. Kṣīrapāka with gokṣura and takra can also be given.

Svarasas like kūsmāṇḍasvarasa, bahunetrāphala-svarasa are found effective in case of aśmari. Ghṛta preparations like Sukumāraghṛtam, Vastyāmayāntakaghṛtam can be used. Kaṣāya preparations like Tṛṇapañcamūlakaṣāyam in pittāvastha and Vīratarādi kaṣāya in kaphāvastha should be used.

In painful conditions ariṣṭa made out of Vīratarādi gaṇa is very good. “Sarvadā copayoktavyo vargo vīratarādinā” implies that this gaṇa can be used in all the conditions.

Even some guḷika and lehya preparations are also useful. In kaphaja mūtravaḥsrotovikāra kṣāra preparations are much useful. Even though they are widely available we are not utilizing them. The patent companies have named them as ‘Alkalizers’ by taking the modern principles. But our classical preparations like Āviltolādi, Panaviralādi, etc. are very rarely prescribed by the vaidyas. If analyze the phalaśruti of Āviltolādi bhasma i.e. “Etat bhasmajaleyavāguvihitam pāloṭu moroṭu tān kūṭṭiṭṭāsu nihanti śophamakhilam gulmodarādīnapi”, a wide range of applicability of this particular preparation can be seen. Vaidhya-bhūṣaṇam K. Raghavan Thirumulpad (author’s father) was using this preparation as a prakṣepadravya in Punarnvādi kaṣāya.

Ēraṇḍa with its śūlaghna property is highly valuable here. “Gandharvahastā bṛhatī vyāghrī gokṣura... aśmarī bhedanam” shows its importance in this context as well as in case of other painful disorders. Guggulu preparations like Punarnavāguggulu, Gokṣurādi guggulu, etc. can be given especially in the dominance of kaphadoṣa. Single drugs like gokṣura, hapuṣā, pāṣāṇabhedī, etc. should be used. Lepa and picu especially in case of urinary incontinence have to be done below the umbilicus. In order to prevent the recurrence of the disease, rasāyanas like Cyavanaprāśa should be given. In the preliminary stage it is found to be bheṣaja-sādhyā, but in the later stages it becomes śāstra

sādhyā, especially in case of aśmari. “Akriyāyām dhruvo mṛtyu kriyāyām samśayā bhavet ...” is the exact condition where we have to perform the surgery. Surgery is opted only when the patient’s condition is fatal. We have to use the āhāra, vihāra and auśdha which are mūtraḷa in nature. According to the condition of the patient various methods can be tried.

While going to the pathyāpathya it is difficult to mention the names due to the diversity of the disorder. Kulatha and other cereals which do not hamper the pitta can be tried. Āvikṣīra prayoga should be tried. Purāṇaguḍa, ādraka, kūśmāṇḍa, śuṅṭhi, nāḷikera, punarnava, etc. can be included in the routine diet.

The quantity of water intake should be regularized according to the condition of the disease. In case of śopha, water intake should be very minimal. Sesame, mustard, cashewnuts bring down the urine output. So, there should be a good restriction in case of the diet.

The above mentioned things ensure the wide range of āyurvedic concepts. It does not mean that the other science should be discarded. The modern technologies can be used for the diagnosis but we have to make sure that they help to understand the doṣa-dūṣya involvement and there after the treatment. A majority of the medicines like kṣāra, avikṣīra, daśemāṇi gaṇa explained in Caraka-saṃhita are to be administered to meet the challenges.

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Advanced methods in renal diseases management

C.D. Sahadevan

Even though there are end numbers of renal disorders, generally we are getting chronic renal failure, IgA nephropathy, nephrotic syndrome, polycystic renal disease and renal calculus patients. We can correlate these disorders with the āyurvedic classification as follows: CKD - vṛkkaśoṣa; IgA nephropathy - viśāmaya vṛkkaṛoga; nephrotic syndrome - vṛkkaśoṣa; diabetic nephropathy - vṛkkaśāda; polycystic renal disease - vṛkkaṅgranthi and renal calculus - aśmari. If go through the above classification we can realize that these disorders can be treated with āyurveda. If thoroughly go through the causative factors we will come to know that these are due to the duṣṭi of raktadhātu caused by the intake of vidāhi food, viruddhāhāra, etc. There are four types of raktaduṣṭi: i) IgA nephropathy which is due to the toxins which get accumulated from different foods and medicines; ii) nephrotic syndrome, caused due to the excessive cholesterol in blood; (There is a book named Bāla Aṣṭāṅghṛdayam where it is mentioned as nīrkarappan); iii) due to the increased uric acid level resulting in CKD; and iv) the triglycerides which is getting accumulated in blood results in the formation of renal calculi.

Chronic kidney disease (CKD)

In this particular condition we have to carry out the śodhana, bṛmhaṇa and śamana type of treatment according to the stages of the disease like āmāvstha, māndyāvastha and punarujjīvanāvastha or refunctioning stage. This is possible only if 30% of the kidney is functioning. If it comes below 30% it is considered as yāpya. If a person is drinking 1400 ml of water and if 1200 ml urine output is present then we can assume that 30% of the kidney is functioning.

Guḷūcyādi vasti (formulated by the author) is found very effective in CKD. It contains Guḷūcyādi kaṣāyam, Vaiśvānara cūrṇam 20 to 25 gm, is given only as kaṣāyavasti. A person whose body weight is below 50 kg can be given 350 ml. of vasti and whose body weight is above 50 kg should be given 450 ml. As the colon area is not functioning properly this method should be followed. This combination reduces the acidity and improves the rate of absorption. “नहि वस्ति समं किञ्चित् वातरक्ते प्रशस्यते”, “वस्तिरेव शरीरम्” - these two quotations from the literature are highly significant here. In all renal patients it is found that the uric acid level is always high which can be considered as vidahyānna. So it has to be brought down first, for which vasti is the best choice, especially Guḷūcyādi vasti and kṣīravasti, as they are of karṣaṇa nature. Ghṛtatailavasti always increases the uric acid level in blood. So, to reduce the rūkṣata in the body, kṣīravasti is the good choice. It also decreases the creatinine level. It brings down the increased potassium and sodium in the body as well as the blood pressure, within five days. Mr̥dusveda has to be performed which reduces the body pain. Patient has to follow the peyādi krama. The commonly used śamanaśadhis include Gandharvahastādi kaṣāyam which is having the properties ‘vahnirbalāya rucaye malaśodhanāya’, which means it improves agnibala, does malaśodhana and thereby brings vātanulomana also. Thus it is the first choice in case of increased uric acid level, hypercholesterolemia, increased triglycerides, etc. Here the kaṣāya should be used only by adding jaggery and rock salt.

Mañjiṣṭhādi kaṣāya mentioned in Vātarakta-

prakaraṇa is the second drug of choice. It brings down the serum uric acid level above 10 mg/dl also. Its ingredients have a special property of bringing down the medodoṣa. Next choice is Gulūcyādi kaṣāya which has dīpana and pācana (digestive and carminative) properties and it also reduces the hyperacidity. The ingredients of this yoga possess diuretic property also. Amṛtādi kaṣāya mentioned in Sahasrayoga (Mūtrakṛcchra) consisting of śuṅṭhi, āmṛta, āmalaki, aśvagandha and gokṣura is a good choice in CKD which should be given after normalizing the uric acid level and later on only one drug has to be given as more drugs may hamper the renal functions by bringing the āmatva.

Drākṣādi kaṣāya mentioned in Jvaraprakaraṇa is very effective in this condition especially where the albumin loss has happened. This is also very effective in case of lowered liver functioning, chronic liver disease, chronic alcoholic liver disease, etc. where albumin loss is found. A doctor by profession was admitted as a patient, who was presented with paraplegia and diabetes. He was not having any renal complaints but severe pedal oedema was present. On examination it was realized that his serum albumin was very low. He got cured only with this Drākṣādi kaṣāyam. As it is having a rasāyana property, wherever bṛmhaṇa is needed this drug can be prescribed.

Annabhedisindūram at a doṣage of 50 mg with anupāna of ginger juice and palm sugar (karippetty) helps in bringing up the Hb%. It will not make any sediments in liver or any other vital organs. Its intake will never increase the veritin level in the blood. So it can be prescribed in renal failure with iron deficiency. Takra (buttermilk) or lime juice should not be used with this drug as these may increase the uric acid level. Lohāsavam should not be prescribed as it may increase the sediments in the liver.

Maṇḍūravaṭakam is the next drug of choice. But Annabhedisindūram is found more effective than Maṇḍūravaṭakam in renal disorders.

A patient who was a dialysis technician came to Dhanvantari Hospital with the investigation reports showing blood urea - 130 mg/dl and Creatinine -

8.9 mg/dl; he attained normalcy within 6 months.

A male patient whose brother died of renal failure, came to the OP department; reports showed blood urea - 145 mg/dl, serum creatinine - 8.9 mg/dl, urine albumin - 3+ and BP - 190/120 mm of Hg. For the first two days he was given Drākṣādi kaṣāyam. Later on after two days Paṭolamūlādi kaṣāyam with Paṭolamūlādi sūkṣma cūrṇam was prescribed in the morning and Kulakādi kaṣāyam in the evening. Kulakādi kaṣāyam (Sahasrayogam) was selected as it contains viśahara and śodhana dravyas. Vaiśvānaracūrṇam ½ tsp. was prescribed as it is laghu, uṣṇa and vastiśodhaka. Vaiśvānaracūrṇam works as a good stimulator. After two weeks BP was found to be normal. Blood and urine R/E, microscopic examination were done every week and he showed good improvement. After three months, blood urea came down to 40 mg/dl and S. Creatinine come to 1.8 mg/dl. All medicines were stopped and advised Guggulutiktaka ghṛtam 1 tsp. with luke-warm cumin seed water as anupāna. He was also advised to continue the peyādikramam. Since 26 years the patient is leading a normal life without any medicines. He got married and is having three children.

The third case is of a nephrotic syndrome with increased viscosity of blood. His BP was very high. In this case regular BP check-up and also lipid profile and urine albumin were noted. As body is losing albumin, the level will be always high in urine. Thus it brings oedema in the body. Only with the usage of Drākṣādi kaṣāyam it can be managed. In nephrotic syndrome blood and urine should be tested once in 3 or 4 days. Urine examination is most important. During the treatment pathyāhāra is much essential. So peyādikrama is necessary as it improves the agnibala. High protein diet should not be prescribed at any point of time, as there is albumin loss. It may also increase the workload of the kidneys. Here the drugs given for high BP is not ideal, for eg. Sarpagandhādi guḷika, as it may increase the chance of renal failure. Likewise prescribing ariṣṭa is not ideal as it may cause some acidity problems. Gandharvahastādi kaṣāyam is a drug of choice here. It improves the agnibala there by increasing the rate of absorption

and reducing the work load over the kidneys. It also does the vātaśamana as well as malānulomana. It decreases cholesterol level in the blood and increases albumin.

Tālīsapatrādi vaṭakam mentioned in Grahaṇīcikitsa is found very effective for nephrotic syndrome. The drugs prescribed for grahaṇi will have a specific role over agni, i.e. they have a major role in increasing the rate of absorption. Nirguṇḍyādi kaṣāyam, Vyōṣādi vaṭakam are also having similar actions. They play a vital role in hypercholesterolemia. In Bāla Aṣṭāṅghṛdaya, Vyāghrī aghoryādi kaṣāya is mentioned:

Vyāghrī aghori karuvī kramukasyamūlam
mukkāyumāṛari puḷimbhavanām ṅjarambum
ṭṭātvumūlamivayāl śṛtamām kaṣāyam
veṅṅīrkarappanu guṇamāi bhavikkum

This yoga is found very effective in nephrotic syndrome especially in children. Vasti treatment is not required in nephrotic syndrome. Oral medicines with pathyas give a remarkable result in six months. Four years before, a male patient came with nephrotic syndrome. He was even using some steroids and wyslone tablets. He developed DVT which was cured with Bṛhatyādi kaṣāyam and Veṭṭumāran guḷika. One more patient, a girl came with nephrotic syndrome. She was having severe vomiting which subsided with a toya prepared out of vilvamūla, pippali and gokṣura. This was given along with honey. She also recovered from nephrotic syndrome and now living without any medicines since two years.

A patient of polycystic kidney disease or vṛkkagranthi was tried with Ciruvilvādi kaṣāyam and Vaiśvānaracūrṇam. This gave marked improvement in the blood parameters especially serum creatinine which came to 3.7 mg/dl, blood urea - 40 mg/dl and serum uric acid - 6.2 mg/dl

with a regular usage of the medicines. The above result was obtained within few days. Currently the patient is given treatment for granthi by taking it as medo āvrta granthi.

Renal calculi are one such disorder that we come across in our daily practice. Aśmarībheda kaṣāyam mixed with Sahacarādi sevyam is found very effective in its management. A lubricating medium is very necessary to move the calculus. So a snehakalpana must be prescribed with kaṣāya. In many cases after the usage of these medicines, calcium phosphate crystals were observed in the urine. Mṛdusvedana also works here.

In case of stag stone, Kallūrvañjikaṣāyam is not sufficient. Here Tailapānam especially in uttama mātra, 20 - 25 bindus has to be done first, followed by a mṛdusvedana. Intake of Aśmarībhedana kaṣāyam mobilizes the stone and it will be eliminated through urine. Aśmarībhedana ghṛtam which is a combination of Sahacarādi sevyataila and Indukāntaghṛta (formulated by the author) is found very effective in many patients.

Thus if an āyurvedic practitioner is treating renal failure patients with the help of an allopathic doctor we can completely cure many renal problems with āyurvedic medicines. Allopathic side will be helpful in doing the necessary investigations like blood investigations, ultrasonography, etc. especially to avoid emergency situations. There is a practice of giving Kaiśoraguggulu in the early stages of vṛṇa. This practice may lead to renal failure. Kaiśoraguggulu should be prescribed only in the nirāmāvastha. Thus if we follow the literature with a thorough observation of patients' condition, āyurveda can cure most of the renal disorders effectively.

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SUMMARY

K. G. Viswanathan

The comparison of renal diseases with prameha by Dr. Sreenivas Acharya was highly scientific as well as challenging. Dr. Ramdas Pisharody explained in the light of modern scientific findings. We should approach this science in a more professional manner, was the gist of the presentation. Dr. Ramdas Pisharody opined that 60% of the renal disorders are preventable. Āyurveda definitely has a hope in this particular area. Many of the physicians are not interested in the preventive aspect of a disease and moreover they are giving more interest towards the curative side in thirst of financial benefits. Dr. K. Murali opined that the treatment should be aimed on the curative aspect of the disease especially with oral medicines rather going for the samprāptivighaṭana. It is quite interesting that he explained 24 types of treatment in this aspect. Dr. C. D. Sahadevan presented his clinical experiences which helped many physicians in building up their confidence.

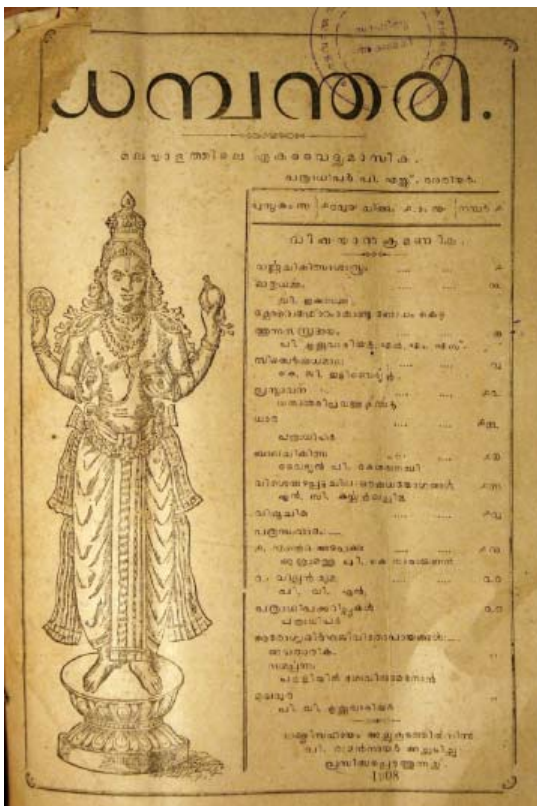
Transplantation is the only choice in renal diseases was the belief of a majority of people in the society. These presentations help one to rethink about other options. Present statistics show that youngsters and children are more prone to renal problems. Major reason is with the food intake especially with the salt consumption. Even though our literature advises sāmudralavaṇa not to be used regularly, we are using excessive quantity of salt. One has to keep in mind that we are going against the warning of the WHO. We being doctors should give utmost care in bringing awareness among the people. Nowadays, we are using iodised salt instead of common salt. According to WHO over use of iodine is equally dangerous to the deficiency of iodine. It may cause severe health hazards. A study can be conducted in this regard.

Renal disorders can also be included in the group of iatrogenic disorders. We must keep a solid proof with us in this matter. For example we are using pet bottles as medicinal containers. Preservatives are added in these medicines. We must have a solid proof in this regard that the medicine is not reacting with the container which may harm the patient. As there are some studies which reveal this matter. Scientists have found out that antimony is getting leaked from pet bottles. This may lead to many immunological defects. Even the beer companies are using glass bottles as containers because of this. So we should have an awareness in this matter.

Dr. Rajagopalan has mentioned the quoting from a book called Vaidyatārakam which tells that pāradam is very effective in renal disorders. But unfortunately we don't have such a collection of data now. Attention must be paid in this regard in future.

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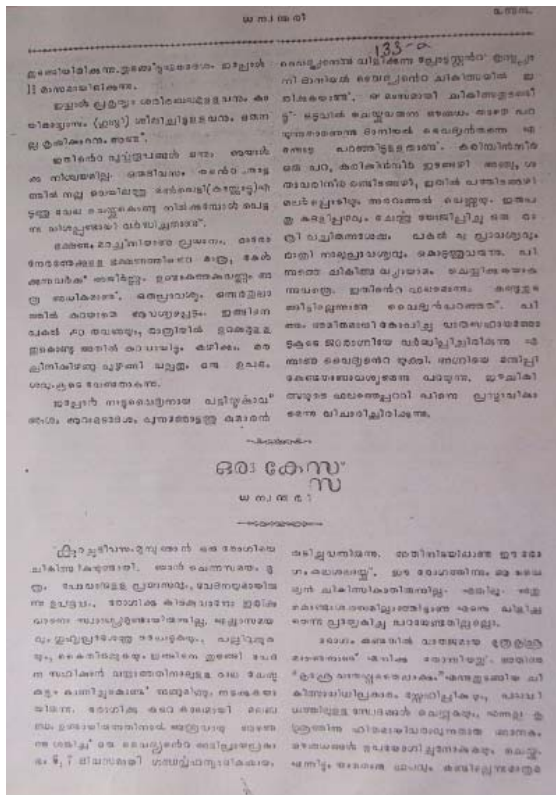
DHANVANTARI



Dhanvantari is the first Health Magazine in Malayalam. It was published continuously for 23 years from 1903 to 1926 (274 issues) with Vaidyaratnam P.S. Varier as the Chief Editor and Kavikulaguru P.V. Krishna Varier as the Manager. Dhanvantari was the mouthpiece of Arya Vaidya Sala and the medium through which Vaidyaratnam P.S. Varier interacted with the outer-world. The columns were devoted for heated discussions on the topics related to indigenous medicine, reports of Āryavaidya-samājam, syllabus and scheme of examination for āyurvedic studies etc. Apart from the basic principles and the diverse approach of āyurveda, clinical experiences, unique and exquisite medicinal preparations and the latest developments in the field of āyurveda were also discussed in the journal. This brought all the scattered āyurvedic community under one umbrella. Dhanvantari played a significant role in rejuvenating and modernizing āyurvedic studies in the State. The history of āyurveda in Kerala during the modern period will not be complete without a study of the role of Dhanvantari.

By considering the vivid nature of the journal, English translations of some of the articles are reproduced here.

A case of mūtrakṛcchra



Book No. 9:11,
1087 Mithunam (1912 - CE)
Article No.8, Page 133.

A few days back I had a chance to treat a patient with strangury. When I met him he was in agony and pain because of obstruction of urine. He was restless, rubbing his groin and palms with clenched teeth and was strolling. Since the patient was suffering from constipation a physician has advised him to take Gandharvahastādi kaṣāyam for flatulence. He was taking it for nearly a week. It was then that he was affected with strangury. The aforementioned doctor treated it just to no avail. Then they approached me.

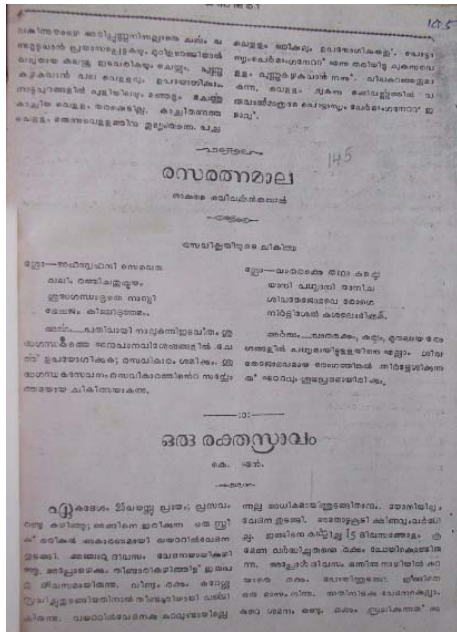
I diagnosed it as strangury caused by vāta. कृच्छ्रे वातघ्नतैलाक्तम. Accordingly he was given ghee formulations and administered different types of fomentation. Apart from that he was also put on medication for strangury. But he did not respond to it. It started getting worse. He was in agony and grew weak day by day. I was perplexed. Since the intake of Gandharvahastādi kaṣāya started this, I thought that one of the many constipating drugs would cure it. I advised opium the best among them.

He was given 10 gms of Dover’s powder because that was the only one handy at that time. To everyone’s astonishment, he was relieved in 15 minutes and was able to pass urine. Another dose was given and he was completely cured.

It is an irrefutable fact that opium causes obstruction of urine. The logical conclusion of every physician would be to prescribe diuretic for strangury. The opposite result shown in this particular case is because it was clearly a virecana atiyoga vyāpat where the laxative acted as an initiator.

A case of bleeding

Sri K.N.



Book No. 7:12
1085 Karkkitakam, (1910 CE)
Article No.10, Page 145.

A 25 year old mother of two, once suffered an acute stomach ache for no known reason. It started 20 days after the menstrual cycle. The stomach ache was followed by bleeding and nearly 250 ml blood was lost on a daily basis and towards the end it was brick-red in colour. She became very weak. The surprising fact was that she kept it for herself. Her husband was away for nearly a month. Only on his return she revealed it. Immediately he called an allopathic physician and the treatment began. It lasted for a month. The only relief was that the consistency was slightly reduced. Many physicians were consulted but to no avail. Alternative medicine was also given a try. Most of them opined that it was raktapitta. They tried kṣīradhāra. Not only did this aggravated the condition but also developed other complications.

It was then that the Ālattūr Nambi, the

third, happened to see the patient. She was suffering from the following symptoms: unbearable acute pricking pain in the vagina, splitting pain on the left side of the abdomen, discharge of blood clots or pus or both, discharge of black slimy hard substance, loss of appetite, disturbed sleep, extreme weakness, restlessness, pale looking and a burning sensation from below the navel to the rectum.

Saptasāram kaṣāyam without dry ginger and horse gram was prescribed. Another kaṣāyam of lodhra tvak and jambū puṣpa with honey as additive was to be taken in the morning and in the evening triphala, yaṣṭīmadhu, kṛṣṇajīrakam kaṣāyam with Vāyugūḷika as an additive. Milk should be boiled with rāsna, kapikacchumūla and uśīra. Then vago rice is to be cooked in this milk. This gruel was to be taken at dinner time. At bed-time a mixture of equal quantities of cow's milk and goat's milk boiled with tālisapatram, ela and tvak were to be taken.

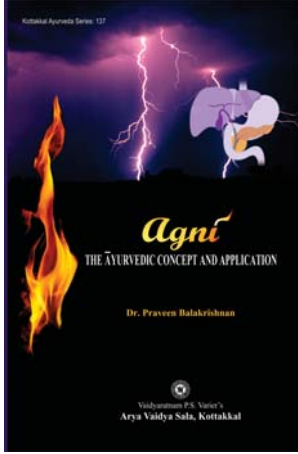
The logic behind this is that Saptasāram balances vāta. Dry ginger and horsegram was removed from the Saptasāram kaṣāyam because they aggravate pitta. The burning sensation is due to the predominance of pitta. This is the reason why nāgakesara and lodhratvak were included. Then again to balance vāta the milk gruel and Vāyugūḷika was added. Vraṇāśodhanatvam is the aim behind prescribing the evening kaṣāyam with honey as an additive. The logical conclusion of bleeding followed by brick red discharge again followed by pus confirms the bruises inside. The milk at bedtime is for the loss of appetite.

Tridoṣa singularly and collectively cause diseases. To categorize them and give formulations to each of them is humanly impossible. Similarly we do not know this is to be termed vātiki or not. But the importance is to be given to the tridoṣa. It is evident that the treatment is based on this.

The kaṣāyam taken in the morning is said to relieve the pain and burning sensation whereas the evening kaṣāyam is for vraṇāśodhanaropaṇatvam. The milk gruel is for weakness. The mixture of breast milk with camphor applied on the crown relieves insomnia. Unless the bruises are healed, the discharge will not stop.



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AGNI THE AYURVEDIC CONCEPT & APPLICATION

Essay adjudged best in
All India Ayurveda Essay Competition 2014

Dr. Praveen Balakrishnan

The concept of agni has been taken from the darśanas. It has been applied in the human body by using lokapuruṣa-sāmyasiddhānta. Ācārya Caraka has described in "Vātakalākalīyamadhyaṃ" that the agni which is found in this Universe is itself applied into the body. Hence, a thorough knowledge of the basics of agni is required for its apt understanding in human body.

Agni is the division of tejomahābhūta and hence all the guṇakarma of tejomahābhūta will be present for agni. Tejus is tīkṣṇa and uṣṇa in nature. Hence, agni in śarīra is also tīkṣṇa and uṣṇa. Ṛgveda starts with hymns praising agni. This signifies the importance of agni in every activity. In Śabdakalpadruma, synonyms of agni are mentioned. Thorough understanding of the meaning of these synonyms is quiet essential to understand the broader aspects of agni in human body.

Agni is present everywhere in human body, but still there are some prime places of agni, according to Badanta Nāgārjuna. Jaṭhara is the prime place of agni. This agni is present in the pittadharakala, also called as grahaṇi.

At this point, it is quiet important to understand the difference between pitta and agni. Agni is the active force or vīrya of pitta. Pitta can be physically collected. Agni can only be understood based on its functions.

Agni in human body performs five different types of activities - Pācaka, rañjaka, bhrājaka, ālocaka and sādḥaka. These are performed through agents of respect names, but the doer is agni and hence agni is considered to be five. Apart from these there is a subtype of agni called kāmāgni which helps in enjoying the pleasure of sex. Kuṇḍalinī, jīvātmā and paramātmā are various forms of agni. In Saṅgītadarpaṇa, even the nāda (voice) is said to be originated due to agni.

In all these functions, agni exhibits three pathological forms: Tīkṣṇāgni, mandāgni and viṣamāgni. These functions are assessed based on the karma. Some of the pathological states can be assessed using modern diagnostic techniques.

Knowledge of treatment aspect of agni is very important, especially where the agni is manda and pitta is increased. This is because agnivardhanadravyas, which are obviously tīkṣṇa and uṣṇa in nature, will increase pitta. Hence, pittaśamana and agnivardhanadravyas like tiktarasa are the drugs of choice in such situations. Agni is an inevitable part of pañcakarma therapy. Hence, agni should be checked in every stage of pañcakarma.

Apart from the treatment aspect, agni has importance even in svāsthyaśamrakṣaṇa. That is the main reason for mentioning samāgni in the context of svastha. Knowledge of factors that derange and increase agni is very essential.

Even the yogāsana and prāṇāyama improves the agni. Hence, regular practice of āsanas and prāṇāyāma also helps in improving the agni. If we see the concept of agni, we can understand that agni has a role from the time of fertilisation till the time of death. There is no process in the Universe that undergoes without the involvement of agni.

In six chapters Dr. Praveen Balakrishnan explains all the functions of Agni in human body as described in the classical texts.

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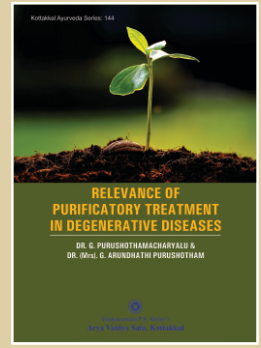
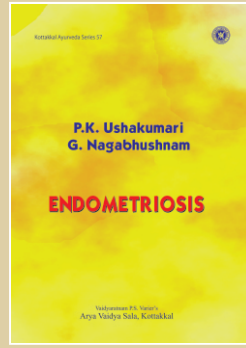
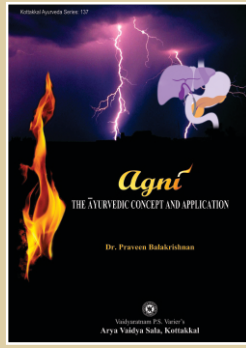
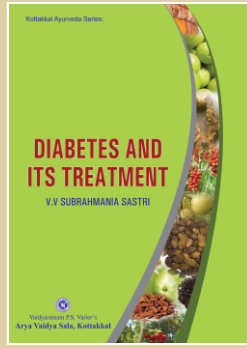
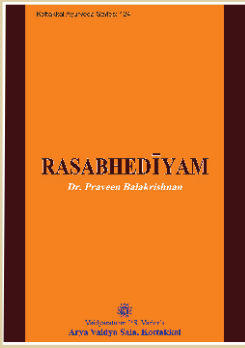
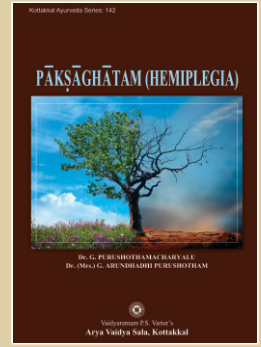
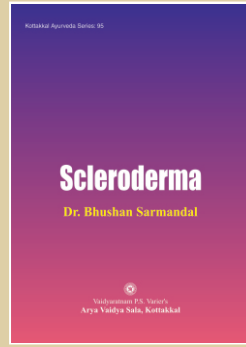
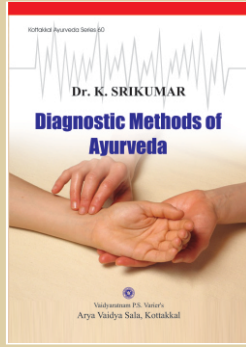
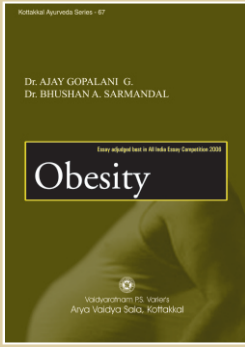
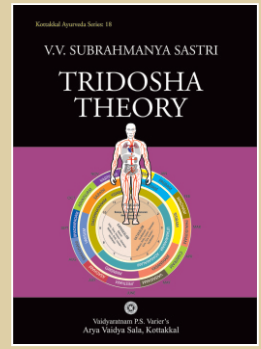
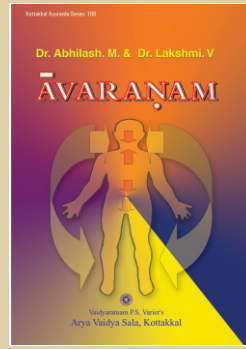
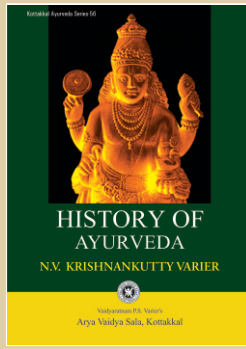
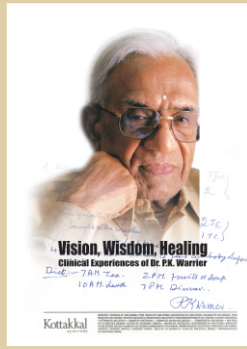
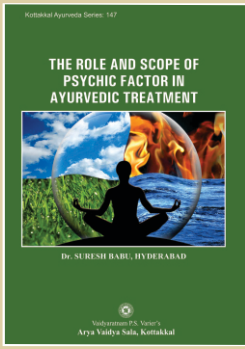
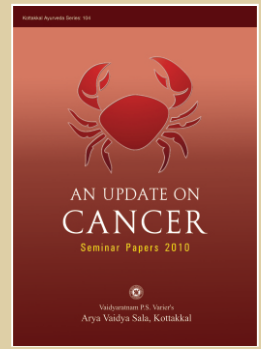
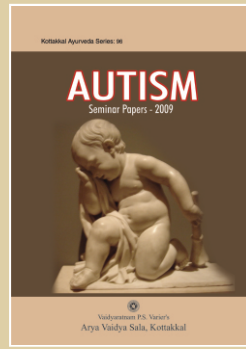
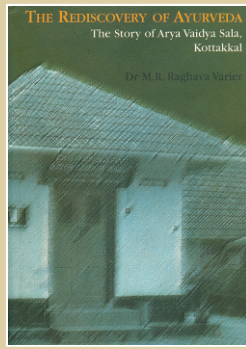
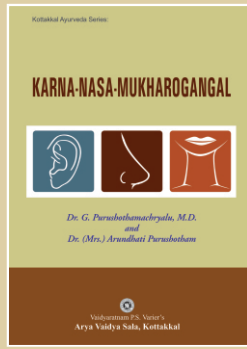
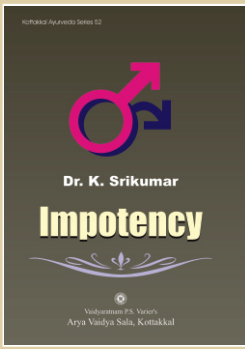
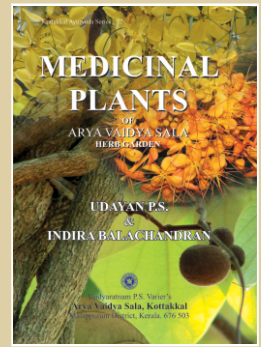
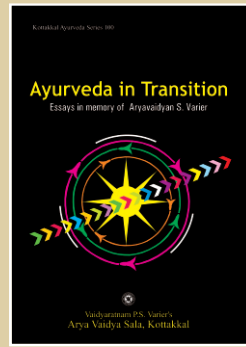
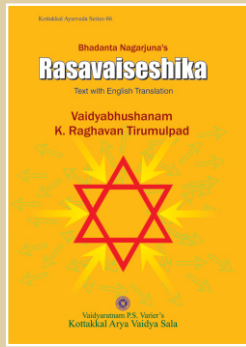
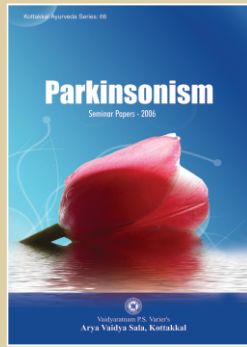
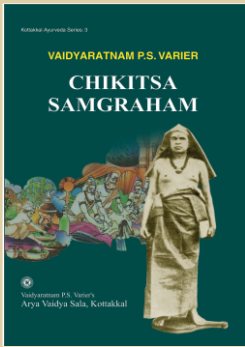
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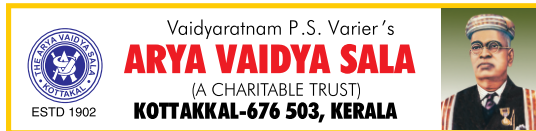
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