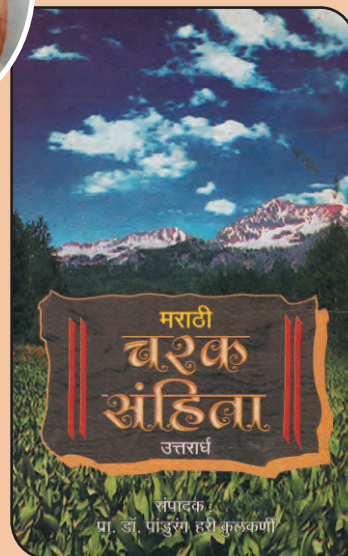
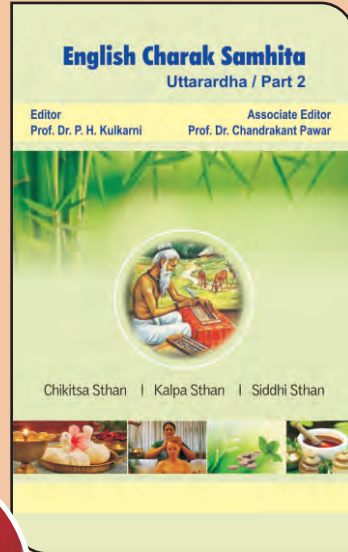
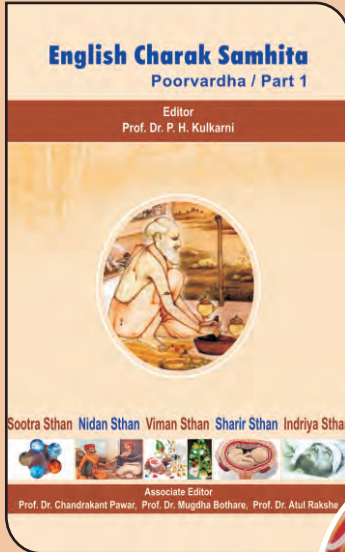




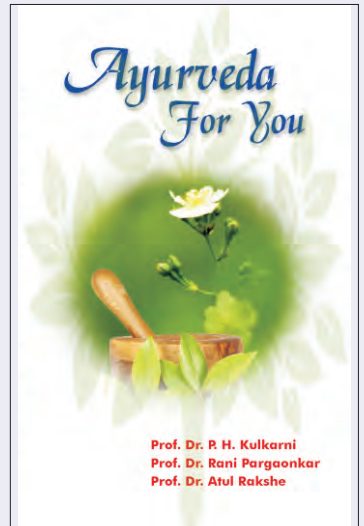
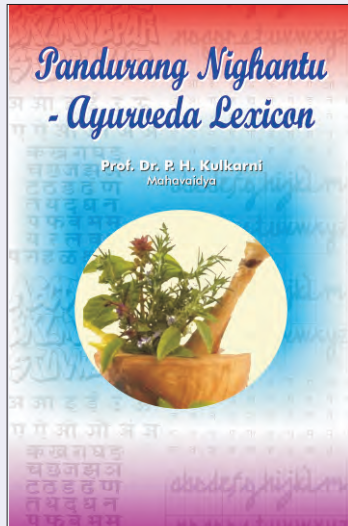
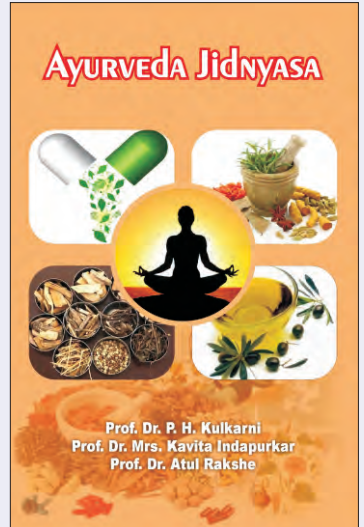
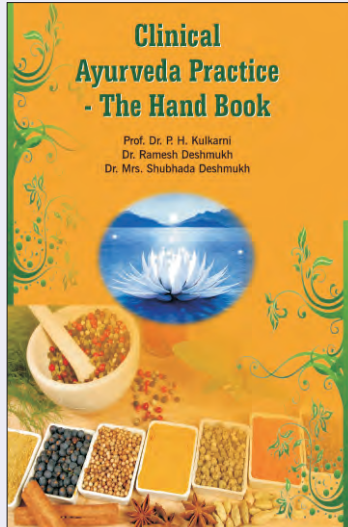
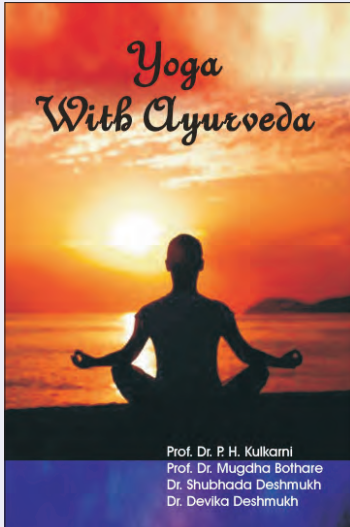
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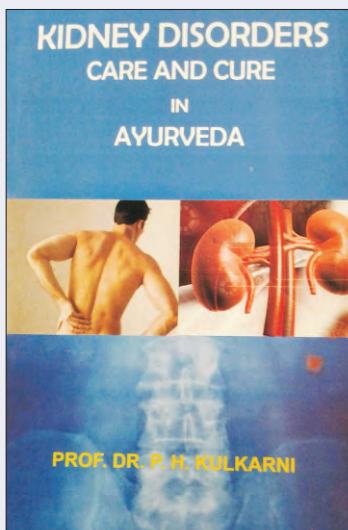
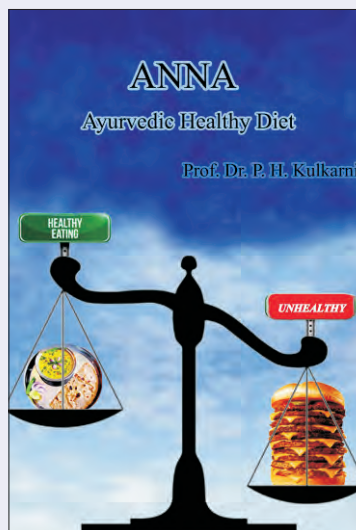
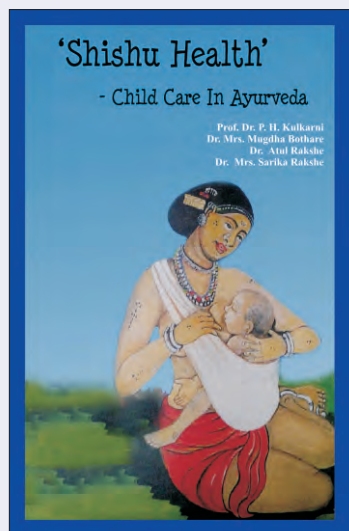
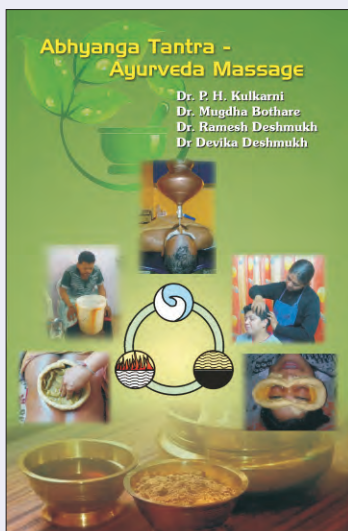
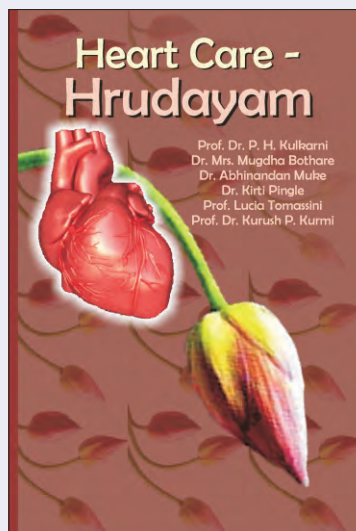
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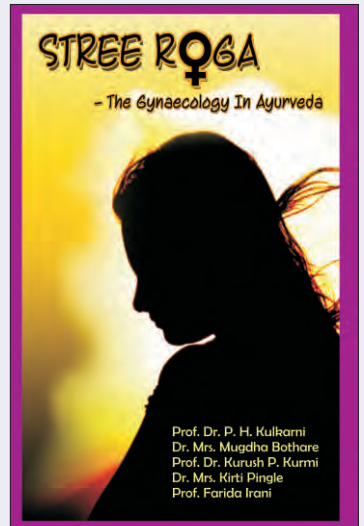
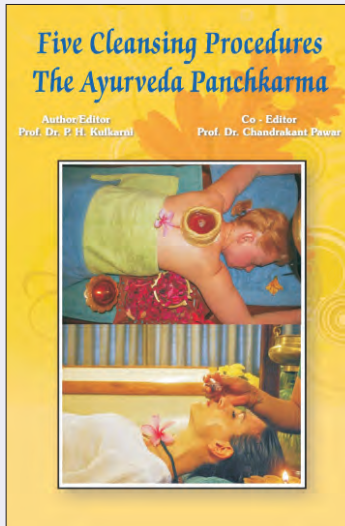
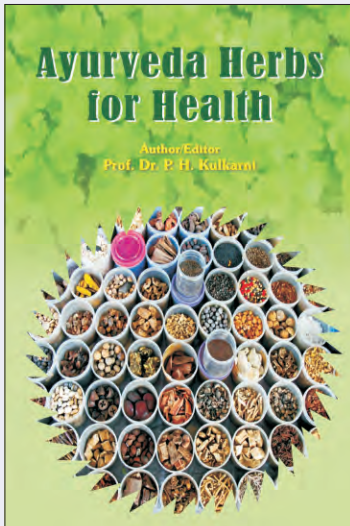
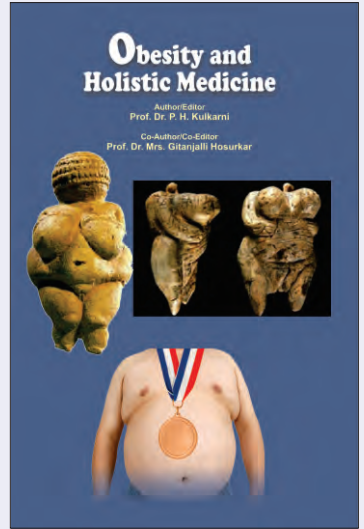
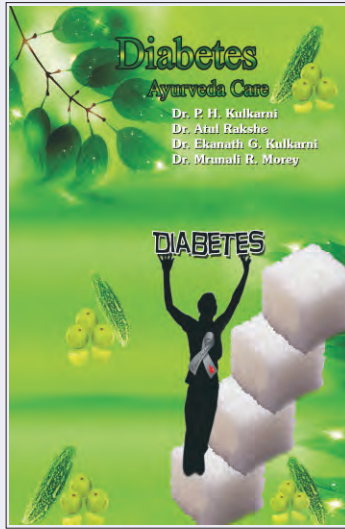
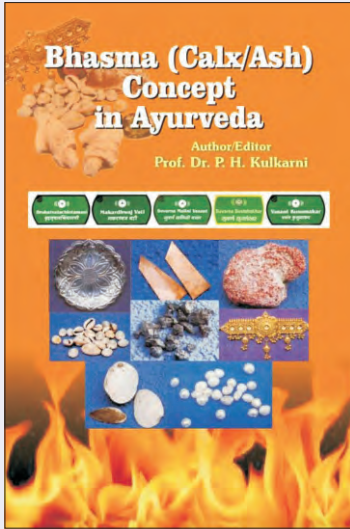
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CHIEF EDITOR

Prof. Dr. P. H. Kulkarni

EDITOR

Prof. Dr. Kavita Indapurkar

E-mail : kavitaindapurkar@gmail.com, Mob. : 9890791688

ASSOCIATE EDITOR

Prof. Dr. Manisha Bhalsing

E-mail : drmanisha.vb@gmail.com, Mob. : 9970898001

EDITORIAL CORRESPONDENCE

Kothrud Ayurveda Clinic,

Opp. Mhatoba Temple, Bodhi Vruksha, Navagraha Maruti,

36, Kothrud Gaonthan, Pune - 411 038. (INDIA)

Telefax : +91 - 20 - 25382130 Tel. : 91 - 20 - 65207073, Mob. : 9822037665

Email : deerghayuinational@gmail.com, profdrphk@gmail.com,

Website : www.ayurvedalokguru.com, www.orientalayurveda.com

Blog : http://drphk.blogspot.in

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Clinical

Research of The Drug on Nasagat - Raktapitta**(Vasa swarasa & Aragwadha phala majja quath)**Prof. Vd. Sanjay. S. Pund¹, Vd. Pravin R. Joshi²,Vd. Amit H. Shingare³, Vd. S. R. Nimbalkar⁴, Vd. G. V. Lokhande⁵

1. H.O.D. Dept of Basic Principle and Samhita, G.S.Gune Ayurveda college, Ahmednagar.
2. Assit. Prof. Dept. of Dravyaguna, G.S.Gune Ayurveda college, Ahmednagar.
3. Assit. Prof. Dept. of Swasthavritta, G.S.Gune Ayurveda college, Ahmednagar.
4. Principal & H.O.D. Dept. of Shalya tantra, G.S.Gune Ayurveda college, Ahmednagar,
5. Assit. Prof. Dept. of Shalya tantra, G.S.Gune Ayurveda college, Ahmednagar

Introduction :

After studying *Charak Samhita* more and more times. We discussed each other that after *Jwara vyadhi Charakacharya* elaborated *Raktapitta* chapter so predominance of the *Pitta* dosha causes the *Raktapitta* disease. As we know that *Pitta dosha* is the main for *Jwara* and here also *Pitta dosha* is *pradhan* but it admixed with blood hence the terminology is *Raktapitta*.

Similarities :

Constituency of *Pitta* and *Rakta* is *ushna, tikshna, laghu, visra, sara and drava* this indicates that similarity of the *Rakta* and *Pitta* gives rise immediate *Prakop avastha*. After discussing for the study *hetu, samprapti* and types of *Raktapitta* are concluded but for research we had taken only on *Urdwaga Raktapitta, charaka* elaborated in *Agrya sangrahnaya adhyaya* that *Vasa* is main drug of choice for *Raktapitta* so we had taken two group for study 39 patients for *Vasaswaras* and 39 patients for *Aragvadha phala majja quatha Pratimargam cha Harnam!* – *Virechana* (Purgation) for scientific study in which season patients having this *dosha* and the patient had taken the treatment of *Jwara, Kamala, Pandu* etc. and as a complication patients lights to us.

Materials & methods :

Clinical trials in G. S. Gune Ayurved Hospital Ahmednagar and Yogdan Hospital Ahmednagar

Exclusion criteria :

1. Asthmatic patients including Hypertension
2. Pregnancy, Cancer, Tuberculosis
3. Conclusive disorders, Psychotic conditions, non co-operative patients
4. Alcoholic and addicted
5. HIV and HBsAg positive patient.
6. Patient on anticoagulant drug

Inclusion criteria :

1. Age between 10 to 40 yrs
2. Male or female no caste and creed bar
3. Co-operative and obedient

Assesment Criteria :

1. No bleeding from nose – 0 drops
2. Mild bleeding from nose – 2-5 drops at onset
3. Moderate bleeding from nose – 5-10 drops at onset
4. Severe bleeding from nose – 5ml-10ml at onset with thirst and headache.

Drug of action of Vasa :

Vasa swarasa – 20 ml (Plain swarasa)

Anupana – Cold water (***Sthambane Shitam!***)

Dose – 3- 5 days.

Drug of action of Aragwadha majja quath (*Pratimargamcha harnam!*)

Dose – 40 ml. (Depends on the constituency of the patients *Agni, Koshta*)

Time – Morning with Luke warm water.

Then Patient is NBM for 6 hours.

Duration of Illness – 10year – 40 year

- **Group I** - Patient treated by *Vasa swarasa* – **39**
- **Group II** - Patient treated by *Aragwadha phala majja quath* – **39**

Follow up – 3 follow ups were taken into consideration i.e. on 5th, 10th, 15th day

Observation & results**Sexwise distribution treated with Vasa swarasa**

Sr. No.	Male	Female	Total no. of Patient.
In Numbers	22	17	39
Percentage	56.41 %	43.59%	100%

There were 22 male patients and 17 female patients in the group of *Vasa Swarasa* treated patients

Sexwise distribution treated with Aragwadha phala majja quath

Sr. No.	Male	Female	Total no. of Patient.
In Numbers	26	13	39
Percentage	66.66 %	33.34%	100%

There were 26 male patients and 13 female patients in the group of *Aragwadha phala majja quath* treated patients. This chart indicates that female patients are suffering from *nasagata raktapitta* are less than male.

Agewise distribution treated with *Vasa swarasa*

AGE GROUP	Total no. out of 39	In percent
10-20	11	28.20%
21-30	20	51.28%
31-40	7	17.94%

In case of *Vasa swarasa* treated group in 10-20 age are 11 , in between 21-30 age are 20 and 31-40 age group are 7 number of patients were seen

Agewise distribution treated with *Aragwadha phala majja quath*

AGE GROUP	Total no. out of 39	In percent
10-20	09	23.07%
21-30	24	61.53%
31-40	6	15.38%

In case of *Aragwadha phala majja quath* treated group in 10-20 age are 09 , in between 21-30 age are 24 and 31-40 age group are 6 number of patients were seen. This distribution indicates that *nasagata raktapitta* is more in 21-30. According to *samhita* this age is predominate of *pitta dosha*

Doshwise distriubuion treated with *Vasa swarasa*

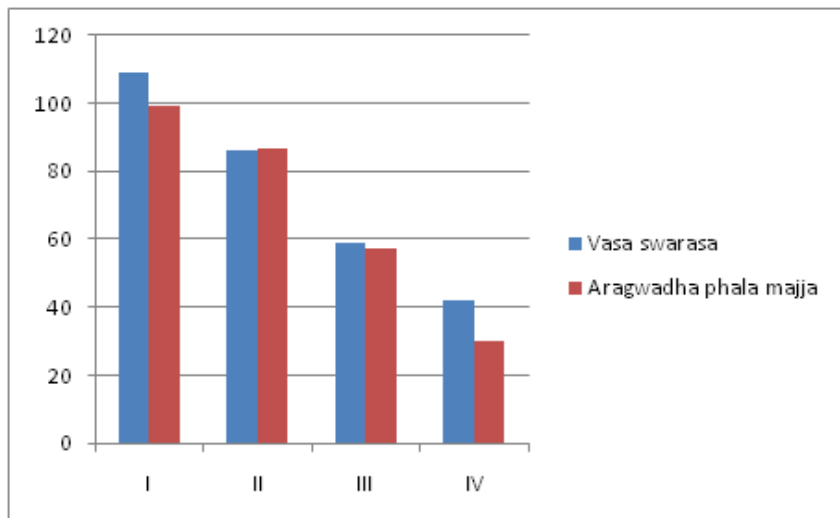
Sr.No.	Type of Dosha	No. of patients out of 39	% of the patients.
1.	Vataja	1	2.56%
2.	Pittaja	7	17.94%
3.	Kaphaja	3	7.69%
4.	Vatpittaj	13	33.33%
5.	Pittakaphaja	10	25.64%
6.	Vatkaphaja	3	7.69%
7.	Tridoshaj	2	5.12%

In case of *Vasa swarasa* treated group *Pittaj*, *vatpittaj*, *pittakaphaja* 7,13,10 respectively. This chart indicates that in *dwandwaja vata pittaja* and *pittakaphaja* are predominant.

Doshwise disrtibuion treated with *Aragwadha phala majja quath*

Sr.No.	Type of Dosha	No. of patients out of 39	% of the patients.
1.	Vataja	2	5.12%
2.	Pittaja	6	15.38%
3.	Kaphaja	4	10.25%
4.	Vatpittaj	12	30.76%
5.	Pittakaphaja	11	28.20%
6.	Vatkaphaja	2	5.12%
7.	Tridoshaj	1	2.56%

In case of *Aragwadha phala majja quath* treated group Pittaj, vatpittaj, pittakaphaja 6, 12, 11 respectively.

Comparative effect therapy of Vasa swarasa and *Aragwadha phala majja quath*

After calculating the total mean it is evident that *Aragwadha phala majja quath* showing a better result in case of *Nasagata Raktapitta*. Here beyond the calculations of within the group and in between the group is not selected because we want to see the direction of the therapy rather than the efficacy. Still both the drugs are having good impact of treatment on *Nasagata Raktapitta*.

Percentage wise result distribution of *Vasa swarasa* treated patients**Percentage wise result distribution of *Aragwadha phala majja quath* treated patients****Discussion and conclusion :**

- a) *Pitta* is the main predominant *dosha* which causes the disease with *Rakta* for *Samprapti bhanga* antiemetic drug *Vasa* is the drug of choice as we seen the properties of *Raktapitta* and *Vasa* we come to conclusion in 39 patient. Miraculous results were found within 2-3 days as patient says to us doctor what can I eat? This desire is sign of curability of the disease.

- b) After giving purgative drug *Aragwadha phala majja quath* patient feel emptiness in stomach, hungeriness, lightness in head, feeling well this signs are very important for *shodhana* karma as we had given without *snehana* and *swedana*, the drug *Aragwadha phala majja quath* as mild purgative.
- c) *Aragwadha phala majja quath* is drug of choice for *Pitta shodhan* according to its constituency along with that *Vata dosha* take its own place after giving purgative drugs only base of the treatment is ***Pratimargam cha harnam!***
- d) *Dosha* and *dushya samurchana* is the main cause for disease. In case of *Rakta pitta* no doubt *Pitta* is being vitiated and then vitiated *Rakta* further excessively increase, its body's normal reaction to throughout it with the opening channels i.e. *srotas* but base on the *gati*, *Rakta* finds its way it is a phenomenal question that arises in mind rather than *dosha* the disease starts with the *dhatu*. In case of *Amlapitta* also *rasa vidhagdata* has been presented and here also *dhatugata vidhagdata* has been presented with special reference to *Pitta*. *Prakruti* cannot be changed throughout the life but there normal status one has to balance with other accessories (*dhatu, ahar, nidra* etc.)
- e) To regulate the *vata gati* we followed the rule *Pratimargam cha harnam!* that's why we use *Argavadha phala majja quath*. After seeing the properties of *vasa* we come to conclusion that *viruddha chikitsa* plays an important role in this disease so for economy and beneficial for patient and instant availability of *vasa* advised for treatment. Basically in *Agrayasangraha* *vasa* is the drug of choice for *Raktapitta*.

Results :

1. *Aragwadha phala majja quath* after *Doshgati of Pitta* immediate no complaints of *nasagataraktapitta* and patient are feeling good rather than post onset of *nasagataraktapitta*.
2. Those patients who are not willing to take *shodhan chikitsa*. We gave him preference to take *swarasa* of *Vasa* in front of us.

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Research : Clinical



Comparative clinical study of *Siravedha* and *Agnikarma* in management of *Gridhrasi* (sciatica)

Dr. Pradip O. Pandao, Pricipal & professor, Department of Shalya Tantra, Dr. Rajendra Gode Ayurved College, Hospital & Research center, Amravati, MUHS Nashik university
Email id-Pradippandao@gmail.com, mob no. 9422863504

Dr. Mrunali R. Morey, P. G. (Scholar Samhita) iddhakala Ayurved Mahavidyalaya, Sangmner, MUHS Nashik, email.id drmrunalimorey9@gmail.com, mob no. 9970291211

Abstract :

Background : Lifetime incidence of low back pain is 5070% and incidence of clinically significant sciatica due to lumbar disc prolapse occurs in 46% of the population. Low back pain and sciatica is major cause of morbidity throughout the world. There is only conservative treatment giving shortterm relief in pain or surgical intervention with sideeffect. There is need to find out quick relief from pain in today's era as it affects physical as well as mental and social life of patients. In Ayurveda, various modalities are given but *Agnikarma* and *Siravedha* are supposed to give instant relief from pain.

Aims : To compare the efficacy of *Agnikarma* and *Siravedha* in the management of *Griidhrasi*.

Materials and Methods : It's an open randomized parallel group trial. A total of 30 patients, divided randomly in two groups, were treated by *Agnikarma* in 19 patients and *Siravedha* in 11 patients. *Agnikarama* was done at lumbosacral spine and Achilles tendon region by *Panchadhatu Shalaka*. *Siravedha* was done from four *Angulas*

below *Janu Sandhi* (Knee joint). Placebo starch capsules were given to all patients. Paired *t*test applied for efficacy within the group and Chisquare test to compare the efficacy of two groups.

Results : Individually both groups had given relief in cardinal symptoms of *Gridhrasi*.

68.42% patients showed marked improvement and 21.05% had complete relief after *Agnikarma*. In *Siravedha*, 72.73% patients had moderate improvement whereas 27.27% patient had marked improvement.

Conclusion : *Agnikarma* gives better effect than *Siravedha* in management of *Gridhrasi*.

Key words : *Agnikarma*, *Gridhrasi*, *Raktamokshana*, sciatica, *Siravedha*

Introduction

Pain is the chief cause of visiting a doctor in most patients. It is known as *Ruja* which is one of the synonyms of disease. It disturbs physical and mental status of a patient. Pain is cardinal symptom in most of the *Vatavyadhis*. *Gridhrasi* is such a *Ruja Pradhaana Vatavyadhi*.

In Gridhrasi intense shooting pain characteristically radiates from Sphika (gluteal region) to Pada (foot). On the basis of symptoms of Gridhrasi; it can be equated with the disease sciatica in modern science. It occurs due to spinal nerve irritation and is characterized by pain in distribution of sciatic nerve. Low back pain and radiating pain

due to lumbar disc prolapse are the major cause of morbidity throughout the world. Lifetime incidence of low back pain is 5070% with incidence of sciatica more than 40%. However thermotherapy include pain relief, stiffness, muscle spasm and inflammatory conditions. These symptoms are observed in the patients of sciatica. Hence considering above facts this study has been planned with aim and objective to evaluate and compare the effect of Agnikarma and Siravedha in the management of Gridhrasi (sciatica). sciatica due to lumbar disc prolapse occurs only in 46% of the population.[1] Hence this is a significant threat to working population. It disturbs daily routine and overall life of the patients because of continuous and stretching type of pain. In reference to sciatica treatment; medical science has only symptomatic management with analgesic like nonsteroidal antiinflammatory drugs. In some cases if nerve compression is more; surgical procedures like laminectomy, discectomy are indicated but these surgical procedures are expensive with their limitations. In Ayurveda, various methods used in the treatment of Gridhrasi are; Bheshaja, Snehana, Swedana, Siravedha, Agnikarma and Basti.[2] In today's era quick pain relief is of prime importance to resume normal activities. Hence Agnikarma (therapeutic intentional burn) and Siravedha (therapeutic bloodletting by vein puncture) are considered as instant healers of pain. Agnikarma and Siravedha have been proved to be effective in Ruja Pradhaan Vatavyadhis.[35] Sushruta has mentioned Agnikarma and Siravedha as parasurgical procedures in Gridhrasi as superior to other treatment modalities.[6,7] The role of Siravedha and Agnikarma have not been studied so far in the management of Vata Vyadhis like Gridhrasi. The common indications of thermotherapy include pain relief, stiffness, muscle spasm and inflammatory conditions. These symptoms are observed in the patients of sciatica. Hence considering above facts this study has been planned with aim and objective to evaluate and compare the effect of Agnikarma and Siravedha in the management of Gridhrasi (sciatica).

Materials and Methods :

Total 38 patients suffering from Gridhrasi, attending the outpatient and inpatient Department of Shalya Tantra, Dr. Rajendra Gode Ayurved College, Hospital & Research center, Amravati, MUHS Nashik university were registered randomly irrespective of their age, sex, religion, caste, occupation, etc., This is an open randomized parallel group trial.

Inclusion criteria :

- Diagnosed cases of Gridhrasi with symptoms like Ruja, Stambha, Suptata, Spandana, Tandra, Gaurav, Arochaka
- Sign like Sakthi nikshepa nigraha (SLR, i.e., straight leg rising test positive)
- Patients of age group between 25 and 65 years.

Exclusion criteria

- Uncontrolled diabetes mellitus, hypertension, tuberculosis of spine and hip joint, malignancy of spine or other organs
- Fracture related to spine
- Cardiac diseases (ischemic heart disease, coronary artery disease, myocardial infarction etc.)
- Anemia (hemoglobin % <07.00 mg/dl)
- Pregnancy.

Grouping :

Patients were divided into following two therapeutic groups.

Group A :

In this group (n = 19), Agnikarma was done with Panchdhatu Shalaka and Bindu type of Dahana. Total 530 Bindu Dahan at lumbo sacral region and 515 Bindu Dahan at ankle region of Achilles tendon were made. After Agnikarma, Haridra powder was sprinkled on wounds and advised to apply Madhu and Ghrita from next day. The same procedure was adopted at 7 days interval for 4 times. Components of Pancha Dhatu Shalaka are Tamra (copper), Loha (iron), Yashada (zinc), Rajata (silver), Vanga (tin).

Group S :

In this group (n = 11), Siravedha type of Raktamokshana with the help of disposable scalp vein no. 20 was done under all aseptic conditions. A total volume of 3060 ml bloodletting according to condition and severity of disease was done from 4 Angula below Janu Sandhi (Knee joint). The tight bandaging was done after procedure. The similar procedure was adopted at 7 days interval for 4 times.

Followup :

After 1 month.

Assessment criteria :

The assessment was carried out on the basis of relief found in the cardinal signs and symptoms of the disease adopting scoring, depending upon their severity. Assessment of pain was done with visual analog scale (VAS) [Table 1]. Assessment was carried out on weekly interval, i.e. on 7th day, 14th day and 21st day and on 28th day to find out the efficacy of Agnikarma/Siravedha in Gridhrasi.

A. Gradation for Stambha (stiffness)

Grade Description

0 No stiffness

1. Stiffness for few minutes after sitting for long duration but relieved by mild movements
2. Stiffness more than 1 hour or more than once in a day but routine works are not disturbed
3. Stiffness lasting for more than 1 hour or many times a day mildly affecting the daily routine
4. Episodes of stiffness lasting for 26 hours \ Daily routines are hampered severely.

B. Gradation for Suptata (numbness) :**Grade Description :**

0 No numbness

1. Occasionally once in a day for few minutes
2. Daily once in a day for few minutes
3. Daily for 2 or more times/30 60 minutes
4. Daily more than 1 hour/Many times a day.

C. Gradation for Spandana (throbbing/pulsating) :**Grade Description :**

0 No Throbbing/Pulsation at all

1. For few minutes occasionally which is relieved spontaneously
2. Daily once in a day for few minutes
3. Many times in a day affecting daily routine
4. Daily for many times severely hampering daily routine.

D. Gradation for Aruchi (anorexia) :**Grade Description :**

0 Normal taste in food, feeling to eat food in time

1. Feeling to take food but not having taste
2. Anannabhilasha – not feeling to take food even if hungry
3. Bhktadvesha – irritability to touch, smell, seeing and listening about food
4. Abhaktachchanda Aversion to food because of anger, stress etc.

E. Gradation for Tandra (drowsiness) :**Grade Description :**

0 No drowsiness

1. Mild drowsiness occasionally but does not affect daily routine
2. Moderate drowsiness frequently many times in a day that hamper daily routine
3. Moderate drowsiness whole day and need to take rest so can't work
4. Severe drowsiness whole day also at mental level reduced alertness etc.

F. Gradation for Gaurava (heaviness) :**Grade Description :**

- 0 No feeling of heaviness
1. Occasional feeling of heaviness not affecting the normal movements
2. Frequent feeling of heaviness affecting the normal movements
3. Feeling of heaviness throughout the day severely affecting the normal movements
4. Feeling of heaviness throughout the day totally hampering normal movements.

G. Gradation for Muscle power :**Grade Description :**

- 0 Active movement against gravity and full resistance (normal power)
1. Active movement against gravity and mild resistance
2. Active movement against gravity without resistance
3. Active movement with gravity eliminated
4. No contraction.

s

- 0 Equal to or greater than 900
1. 710 <900
2. 510700
3. 310500 No contraction
4. <300.

Assessment of overall effect

- Complete remission: 100% relief
- Marked improvement: 75-99% relief
- Moderate improvement: 50-74% relief
- Mild improvement: 25-49% relief
- Unchanged: Up to 25% relief in the complaints of the patients.

Observations :

A total of 38 patients were registered in this work among them 30 patients completed the treatment and 8 patients dropped out. So observations were made on 38 patients and the assessment and results were drawn on 30 patients. Among 38 patients maximum patients belonged to 4150 years of age group (36.84%), females (60.53%), in postmenopausal stage (39.13%) and from middle economic class (71.05%). The maximum patients in this study were having Katu Rasa (71.05%) and Ruksha Guna (52.63%) dominant Ahara and having

habit of Vishama Cheshta (unpleasant posture 50.00%) and Diwaswapna (day sleep 68.42%). Maximum patients had irregular bowel habit and passing hard stool (50%). In maximum patients there was 15 years chronicity (36.84%) but no history of injury (78.95%). The symptoms of Gridhrasi observed among 38 patients of both groups were Ruja (pain) in 100% patients, Stambha (stiffness) in 73.68% of patients, Suptata (tingling sensation) in 81.58% patients, Gaurava (heaviness in legs) in 50% of patients and positive SLR in 89.47% of patients. Bending forward position (63.16%) aggravated pain in maximum patients whereas pain was relieved in lying supine position (71.05%) in maximum patients. In case of type of Gridhrasi 50% each were having Vataja and VataKaphaja type of Gridhrasi [Table 2].

Results :

Effect of Agnikarma :

In patients of Group A, highly significant results were seen in Ruja (64.91%), Stambha (75.42%), Suptata (65.38%), Spandana (pulsatile feeling 42.85%), Tandra (drowsiness 50%), Gaurava (66.68%) and Sakthinikshepanigraha (restricted movement of thigh 66.09%). Agnikarma had provided highly significant results in increasing muscle power of hip flexion (75.02%), ankle dorsiflexion (100%) and great toe extension (75.02%). Lab investigations showed insignificant changes after Agnikarma [Table 3].

Table 1: Detail description of assessment of pain -

Types of pain	Description	Grade	Description
None		0	No pain
Mild	Does not interfere with most activities. Able to adapt to pain psychologically and with medications or devices such as cushions	1 2 3	Very light, barely noticeable pain. Most of the times patient never think about pain Mild pain which is discomforting Very noticeable pain, but patient got used to it
Moderate	Interfere with many activities, Requires lifestyle changes, but patient remained independent, unable to adapt to pain	4 5 6	Strong deep pain and distressing to patient. Patient notice the pain all the time and cannot completely adapt 5 Strong deep piercing pain. Very Distressing to patient. Patient notice the pain all the time and it affects normal lifestyle 6 Very strong, deep piercing pain partially dominating the senses and causing trouble holding

Severe	Unable to engage in normal activities. Patient is disabled and unable to function independently	7	7 Very strong, deep piercing pain completely dominating the senses Patient effectively
		8	8 disabled and frequently cannot live alone 8 Very strong, deep
		9	9 piercing pain with severe personality changes ifthe pain is present for long time 9 Patient
		10	10 can't tolerate it and demand pain killers or surgerywhatever be the side effects or risk 10 Unimaginable, unspeakable, unbearable pain

Effect of *Siravedha*

In Group S, highly significant results were seen in Ruka (33.32%), Stambha (45.82%), Suptata (58.62%), Gaurava (57.15%) and Sakthinikshepanigraha (46.14%) whereas insignificant results were seen in Spandana and Tandra. Siravedha had no significant effect on muscle power. In lab investigations significant decrease was seen in only Hb% after Siravedha (4.67%) [Table 4]. In plain Xray of lumbosacral spine in both groups no significant changes were observed after treatment. On comparison between two groups, Agnikarma was found more effective than Siravedha in Ruka, Stambha and SLR. In symptoms such as Suptata, Spandana, Tandra, Gaurava and Arochaka, statistically similar effect was seen on comparison between two groups [Table 5]. There was no significant difference in effect on muscle power between two groups. In overall effect in Group A, 5.26% patient got mild improvement, 05.26% patient got moderate improvement and 68.42% patients got marked improvement. There was complete remission of disease in 21.05% patients. In Group S, 72.73% patients got moderate improvement, 27.27% patients got marked improvement. No patient was under mild improvement, complete remission & unchanged category after completion of therapy [Table 6].

PostAgnikarma *Vrana*

The wound made by Agnikarma completely healed within a week without any complications and the scar disappeared within 15 days of postAgnikarma period.

Discussion

In this study, maximum (36.84%) patients were in age group of 4150 years. This age group is Parihani Kala of Madhyam Avastha in which gradual decline of Sharira Bala and Dhatus occur and provokes Vata Dosha.[8] There is progressive decrease in degree of hydration of the intervertebral disc with advancement of age which is part of degeneration resulting in disc problems.[9] Maximum (60.53%) patients were female might be frequently involvement in postural stress such as bending, lifting and sustained nonneutral postures in their routine

household works. Other causes such as osteoporosis, multiple pregnancies etc., may also be responsible for sciatica. Maximum (71.05%) patients from middle economical class showed stressful and hard working life of middle class might have caused this disease. The 50% patients had constipated and irregular bowel habit enlightening the role of Apana Vata in the Samprapti of Gridhrasi. 39.13% females were postmenopausal as there is a direct relationship between the lack of estrogen and development of osteoporosis after menopause.[10] In this condition, bone resorption (breakdown) becomes faster than building of new bone. 15 years chronicity of sciatica in maximum patients (36.84%) highlights chronic nature of the disease as Vatavyadhis are Kricchrasadhya (difficult to treat).[11] Excess use of Katu, Ruksha Ahara Dravya in maximum patients vitiated Vata Dosha in body due to their Saman Guna to Vata. Vishama Cheshta and Vishamasana were responsible for bad postural habits whereas Diwasvapna (day sleep) like factors show vitiation of Kapha Dosha and Marga Avrodhajanya Samprapti (obstructive pathogenesis) of the disease. In 78.95% of patients sciatica manifested without any history of injury as sciatica chiefly occurs due to age related degenerative process and lesion in the intervertebral disc. In maximum patients forward bending of body (63.16%) aggravated pain. The reason can be understood due to anatomical consideration of the spine because forward flexion is chiefly function of the lumbar spine. The most frequent type of disc prolapse is posterocentral and posterolateral. When patients bend forward, part of prolapsed disc comes more in contact with posterior longitudinal ligament that has rich nerve supply. In maximum patients (71.05%) pain relieved during lying supine position may be understood due to release of some pressure on nerve roots. Ruka, Stambha, Suptata, Gaurava and Sakthinkshepanigraha were found in maximum number of patients as these are cardinal symptoms of Gridhrasi. In this study, the conventional Siravyadha procedure by Kutharika Shastra was modified by utilizing 20 number disposable scalp vein set; which was easily available and there was no problem of septic precaution. Agnikarma is very effective in treating the chief complaint of pain in patients suffering from sciatica. According to Ayurveda, basic humor responsible for causation of Ruka is Vata and pain is cardinal symptom in most of the Vatavyadhis.[12] Vata Dosha is predominantly having Sheeta Guna which is exactly opposite to Ushna Guna of Agni. So Agni is capable of producing relief in pain by virtue of its Ushna Guna. In Siravedha, expulsion of morbid humors (vitiating Doshas) accumulated due to inflammatory reaction outside body can give relief in pain. Stambha is chiefly due to Sheeta and Ruksha Guna of Vata Dosha.[13] Agnikarma having Ushna Guna acts as antagonist to Vata properties indirectly providing relief in Stambha. The exact cause of muscle stiffness is still unknown, but occurs most commonly due to altered neuromuscular control. In Agnikarma the temperature at the applied site is increased which reduces nerve reflexes resulting in relaxation of muscle. Relief in Suptata after Agnikarma may probably be due to relaxation of the surrounding muscles and ligaments and might be due to release of pressure on sciatic nerve. Suptata is found in Twakagata Vata and in which Raktamokshana is indicated by Sushruta.[14] Hence, in superficial nerve involvement, Siravedha was found effective to relieve Suptata. SLR is highly sensitive, but less specific test for sciatica. Restricted SLR in most of patients is due to pain caused by sciatica nerve stretching so after Agnikarma and Siravedha pain was relieved and SLR was improved. Gaurava is developed due to Guru Guna

predominantly found in Kapha Dosha. As Agni is having Laghu Guna and its Ushna Guna pacifies the Sheeta Guna of Kapha as well, so Ggaurava is relieved by Agnikarma. Spandana, Tandra and Arochaka symptoms were observed in few patients. Advised diet regimen might be helpful to relieve these symptoms during the treatment. Pathological motor involvement is not characteristically found in sciatica and hence it was seen in very less number of patients. Improvement in muscle power after Agnikarma may be attributed to improvement in specific motor supply of muscles involved by acting on their nerve roots. In Siravedha group, average Hb level fall from 13.027 to 12.418 g% but did not have any adverse effect. The change in Hb% after Siravedha can be attributed to direct letting out of RBCs thus affecting the level of Hb.

Probable mode of action of *Agnikarma*

Agni possesses Ushna, Tikshna, Sukshma and Aashukari Gunas, which are opposite to Vata and anti Kapha properties. Physical heat from red hot Shalaka is transferred as therapeutic heat to Twakdhatu by producing Samyak Dagdha Vrana. From Twakdhatu this therapeutic heat acts in three ways. First, due to Ushna, Tikshna, Sukshma, Ashukari Guna it removes the Srotavarodha, pacifies the vitiated Vata and Kapha Dosha and maintains their equilibrium. Secondly, it increases the Rasa Rakta Samvahana (blood circulation) to affected site. The excess blood circulation to the affected part flushes away the pain producing substances and patient gets relief from symptoms. Third, therapeutic heat increases the Dhatwagni, so metabolism of Dhatu becomes proper and digests the Amadosha from the affected site and promotes proper nutrition from Purva Dhatu. In this way, Asthi and Majja Dhatu become more stable. Thus result is precipitated in the form of relief from all symptoms of Gridhrasi. Further it can be endorsed that the therapeutic heat goes to the deeper tissue like Mamsa Dhatu and neutralizes the Sheeta Guna of Vata and Kapha Dosha and in this way vitiated Doshas come to the phase of equilibrium and patients got relief from the symptoms.

Thermotherapy

The use of local heat (thermotherapy) may provide relief of pain and painful muscle spasm by acceleration of metabolic processes whereby the concentration of pain inducing toxic metabolites is reduced. This is accomplished primarily by an increase in local circulation. Acceleration of the inflammatory response to resolution may initially exacerbate discomfort, but will shorten the time course to resolution of inflammation. Thermotherapy is generally soothing and psychologically relaxing, there by favorably modifying emotional response to pain and further reducing painful muscle spasm.[15] Synovial fluid viscosity of joints is known to decrease with increasing temperature. It has been postulated that the joint stiffness may be related to increased synovial fluid viscosity. Relief of joint stiffness may be provided with thermotherapy by a reduction in synovial fluid viscosity.[16]

Probable mode of action of *Siravedha*

Siravedha is predominantly indicated in Pitta, Rakta and Kaphaja Vyadhis or when Pitta or Kapha is in Anubandha to Vata Dosha. In such conditions of Vata Prakopa due to Kapha and Pitta Avarana, Siravedha can help to remove the Avarana of Pitta and Kapha Dosha giving

way for Anuloma Gati of vitiated Vata that indirectly cures the Vatika symptoms along with symptoms produced by Kapha dosha. During the procedure, some patients got immediate relief in symptoms but after 34 days the symptoms reappeared. It may be because of pure Vataja type of Gridhrasi without Anubandha of Kapha. Hence hypothetically it can be said that the Siravedha is useful in patients when there is Avarana Janya Samprapti of Gridhrasi in Vata Kaphaja Gridhrasi.

Table 2: General observations

Observation maximum	Number of patients		Total	Percentage
	Group A	Group S		
Age (4150 years)	9	5	14	36.84
Sex (female)	13	11	23	60.53
Economic status (middle class)	13	14	27	71.05
Menstrual history (menopause)	4	5	9	39.13
<i>Aharaja Nidana</i> (<i>Katu Dravya Atisevana</i>)	15	12	27	71.05
<i>Aharaja Nidana</i> (<i>Ruksha Dravya Atisevana</i>)	11	9	20	52.63
<i>Viharaja Nidana</i> (<i>Diwaswapna</i>)	14	12	26	68.42
<i>Viharaja Nidana</i> (<i>Visama Cheshta</i>)	13	6	19	50.00
<i>Mansika Nidana</i> (<i>Chinta</i>)	6	10	16	42.11
Bowel habit (constipated)	11	8	19	50.00
Chronicity (1 5 years)	5	9	14	36.84
History of injury (absent)	14	16	30	78.95
Aggravation factor (bending forward)	10	14	24	63.16
Relieving factor (lying supine)	12	15	27	71.05
Type of <i>Gridhrasi</i> (<i>Vataja</i>)	11	8	19	50.00
Type of <i>Gridhrasi</i> (<i>Vata Kaphaja</i>)	9	10	19	50.00

Table 3 : Effect of Agnikarma therapy on signs and symptoms

Symptoms	N	Mean score		Percentage	SD	SE	t	P
		BT	AT					
<i>Ruka</i>	19	6.000	2.105	64.91	1.197	0.275	14.183	<0.001
<i>Stambha</i>	14	4.357	1.071	75.42	2.268	0.606	5.421	<0.001
<i>Suptata</i>	17	3.059	1.059	65.38	0.707	0.171	11.662	<0.001
<i>Spandana</i>	3	1.167	0.667	42.85	0.000	0.000	Infinite	<0.001
<i>Tandra</i>	2	2.000	1.000	50.00	0.000	0.000	Infinite	<0.001
<i>Gaurav</i>	11	2.182	0.727	66.68	0.820	0.247	5.882	<0.001
<i>Arochaka</i>	2	1.500	0.000	100	0.707	0.500	3.000	>0.05
<i>Sakthi Nikshepa</i> <i>Nigraha</i> (SLR)	18	3.111	1.056	66.09	0.873	0.206	9.994	<0.001

SE : Standard error, SD : Standard deviation, SLR : Straight leg rising

Table 4: Effect of *Siravedha* therapy on signs and symptoms

Symptoms	N	Mean score		Percentage	SD	SE	t	P
		BT	AT					
<i>Ruka</i>	11	6.545	4.364	33.32	1.168	0.352	6.197	<0.001
<i>Stambha</i>	9	2.667	1.444	45.82	0.441	0.147	8.315	<0.001
<i>Suptata</i>	10	2.900	1.200	58.62	0.949	0.300	5.667	<0.001
<i>Spandana</i>	3	2.333	1.000	57.13	0.557	0.333	4.000	>0.05
<i>Tandra</i>	3	1.333	1.000	24.98	0.557	0.333	1.000	>0.05
<i>Gaurav</i>	8	2.000	0.857	57.15	0.690	0.261	4.382	<0.01
<i>Arochaka</i>	3	2.000	1.000	50	0.000	0.000	Infinite	<0.001
<i>Sakthi Nikshepa</i>								
<i>Nigraha (SLR)</i>	11	3.545	1.909	46.14	0.505	0.152	10.757	<0.001

SE : Standard error, SD : Standard deviation, SLR : Straight leg rising

Table 5: Comparison of effect of *Siravedha* and *Agnikarma*

Symptom	Percentage Agnikarma	improvement Siravedha	Chisquare value	P
<i>Ruka</i>	64.91	33.32	10.054	<0.01
<i>Stambha</i>	75.42	45.82	3.527	>0.05
<i>Suptata</i>	65.38	58.62	1.500	>0.05
<i>Spandana</i>	42.85	57.13	0.750	>0.05
SLR	66.09	46.14	9.413	<0.01
<i>Tandra</i>	50.00	24.98	0.0521	>0.05
<i>Gaurava</i>	66.68	57.15	0.354	>0.05
<i>Arochaka</i>	100.00	50.00	1.701	>0.05

SLR : Straight leg rising

Table 6: Overall effect of therapy in groups A and S

Improvement	Group A		Group S	
	N	Percentage	N	Percentage
Unchanged	0	0.00	0	0.00
Mild improvement	1	5.26	0	0.00
Moderate improvement	1	5.26	8	72.73
Marked improvement	13	68.42	3	27.27
Complete remission	4	21.05	0	0.00

Conclusion :

Agnikarma and Siravedha are simple, cheap, safe and effective in the management of Gridhrasi but Agnikarma is more effective than Siravedha in relieving the main symptoms of the disease.

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Review :



Literary Review of the word 'Kala'

1. Dr. Mallikarjun. S. Hiremath, Ph. D. Scholar 2. Dr. Mrs. Pushpalata B. Kamble

1. Prof Rachana Sharir Dept, BVVS Ayurved Medical College & Hospital, Bagalkot
Karnataka, India, Contact No. : 09482631399 Email : malikdost4u@gmail.com

2. Prof & HOD Rachana Sharir Dept, Bharati Vidyapeeth (DU) College of Ayurved, Pune
Maharashtra, India, Contact No. : 09923139472 Email : dr.pbkamble@gmail.com

Abstract :

Kala is one of the least explained concepts in *Ayurved Rachana Shareera* in *Sushruta Samhita*. Before the era of *Ayurveda* in other texts like *Puran*, *Veda* & *Upanishad* the word *Kala* has been used repeatedly. But the meanings in different texts have been considered differently. Among all other texts the meanings of the word *Kala* has been taken like time, stroke of the music, part of year etc but in the texts of *Ayurved* it is the limiting or separating membrane in between *Dhatu* and *Ashaya*.

Key Words: *Kala, Ashaya, Dhatu, limiting membrane, Purana.*

Introduction :

From time immemorial and from generations together the Ayurved System of Medicine has stood in forefront in maintaining the health of public particularly in India.

Such indigenous system of medicine, Ayurved has got its own basic Principles of Medicine particularly in *Rachana* (Anatomy) and *Kriya* (Physiology) . These two basic subjects include many basic factors which almost governs all the aspects of Ayurved like *Chikitsa*, *Rognidan*, *Shalya* etc.

In *Sharir Rachana* we come across many illustrations or explanations which may be clear / more relevant in that era but in due course of time and as the modern anatomy has developed and the classical system of medicine was sidelined.

Most of the concepts/ principles can be co-related with the modern science but some remain controversial. One such concept which is almost clear and comparable is *Kala*.

In *Sushruta Samhita Sharir Sthana*, which is considered as Standard for Anatomical descriptions, it is said that even though *Kala* is explained in the context with their formation in embryology, they remain important throughout life.

These seem to be physical barriers between the *Dhatus* and *Ashayas*¹ which are physically important compared to their physiological functions.

Once again the concept of *Kala* has been taken into consideration while explaining the *Vishvega*. It has been described in *Sushruta Samhita Kalpa Sthana* that the *Visha Vega*²

crosses from one *Dhatu* to another across the *Kalas*. They show different symptoms based on the *Dhatu when Kala* crosses it.

Materials and Methods :

Laghutrayees and *Brihatryees* along with their commentaries, different *Kosha Upanishad*, *Puran* etc have been reviewed to obtain different references of the word *Kala*. Different meanings of the word *Kala* have been obtained from different texts and critically analyzed to obtain the results.

Observations & Results :

In almost all the texts of Ayurved, maybe it is *Laghutrayee*, *Brihatryee* and their commentaries they have the same opinion about *Kala*.

But in all other literatures other than Ayurved Literature they have got different meanings.

In *Amarakosha* — it is the measure of time ³.

In *Medinikosha* — it refers to sixteen fine arts ⁴.

In *Rigveda*⁵ and *Atharva Veda*⁶ the meaning of the word *Kala* refers to debt.

Among the *Upanishad*, in *Brihadarnyaka Upanishad* and in *Prashnopanishad* the meaning of the word *Kala* is taken as the particular part of year time ⁷. Thus in *Veda* and *Upanishad* the word *Kala* has been used mainly in four senses like— fractions, component parts, qualities and part of time.

In *Purana* also we come across the term *Kala*. In *Vishnupurana*, the term *Kala* has been used in the sense of time ⁸.

i.e *Matra* is *Nimesha* of a person, fifteen such *Nimesh* makes one *Kashtha* and thirty such *Kashtha* makes one *Kala*. Fifteen such *Kala* makes one *nadika*.

In *Agnipurana* we find description about *Kala*. All the seven *Kala* are mentioned similar to that of *Sushruta Samhita (Shareera Sthana)*⁹

Discussions :

Even though the term *Kala* has been quoted in different literatures like *Veda*, *Purana* and *Upanishad* in different meanings.

In *Agnipurana* Chapter 68, we find the description of *Kala* exactly in the same fashion which has been explained in *Sushruta Samhita*.

But *Kala* is a specialized structure explained in *Sushruta Samhita* in *Garbhavyakarana Shariropakramaniya adhyaya* and in *Kalpa Sthana* while explaining *Sarpa Visha Vega Chikitsa*.

In almost all texts of Ayurved we find similar explanations about *Kala* as mentioned in *Sushruta Samhita* except in *Sharangadhara Samhita* location of the 4th *Kala* has been told to be in *Yakrut* and *Pleeha*.

During embryonic stage of development that too in *Dhatu Nirmana* after formation of each *Dhatu*, the *Dhaturasashesha* i.e *Kleda* remain in between *Dhatus* and in future it develops into

Kala which after birth performs **the function of formation, absorption, protection, selection, transformation and secretion.**

Conclusion : We find many meanings of the word *Kala* in different texts like— **time, sixteen types of fine arts, debt, part of the year, fractions, component parts, qualities etc.**

When it comes to *Ayurvedic* Literature, it gives the meaning of a layer which is present between *Ashaya* and *Dhatu*. It may be in **the form of mucous membrane, serous layer, inter muscular septa, lining of bone marrow, synovial membrane, cells of pancreas and the cells of seminiferous tubules.**

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Review :



Review of Concept of Dhatupradoshaja Vikara Described in Classical Ayurvedic Texts

Vd. Archana A. Kulkarni, Associate Professor, Rognidan, Wagholi Ayurved College, Pune, Maharashtra. Email : archana.arukulkarni@gmail.com; Mobile no. : 9422164367

Vd. Vivek V. Nemade, Assistant Professor, Rog nidan, Wagholi Ayurved College, Pune, Maharashtra. Email : drvivek.nemade@gmail.com; Mobile no. : 9545595095

ABSTRACT :

Ayurveda is the most ancient medical science of the world. Ayurveda have classified the elements of the body under three fundamental components *Dosha*, *Dhatu* and *Mala*. *Dhatu*s are most stable constituents of the body and formed the basic structural architecture of the body. *Rasa*, *Rakta adi* seven dhatus hold the body and also perform specific functions like *Prinan*, *Jivana*, *Lepana*, etc. respectively. Along with the *dosha*, *dhatu*s are also involved in emergence of diseases. Our acharyas have broadly catagorised diseases according to *Hetu*, *Sthana*, *Samuthana*, *Sadhyasadhyata* etc. A special chapter has been devoted on concept of *DhatuPradoshaja vikaras* in Charak and Sushrut Samhita. The main aim of this study is to discuss the concept of *Dhatupradoshajvikara* in detail.

With this, literary and conceptual study it can be concluded that "*Pradoshajvatva*" is nothing but the deviation from normalcy. *DhatuPradoshajaVyadhis* are nothing but the group of symptoms exhibited due to vitiation of *Dhatu* by *Dosha*. While treating *dhatupradoshaja vikara* it necessary to consider involved *dosha*, *dhatu bala*, state of *agni* and dual nature of the *dhatupradoshaj vikara*.

Keyword : *Dhatu*, *DhatuPradoshajavikara*, *Pradoshajvatva*

INTRODUCTION :

Ayurveda is the most ancient medical science of the world. It deals with the preventive and curative aspect of disease and also with the promotive aspect of the health. Ayurveda have classified the elements of the body under three fundamental components *Dosha*, *Dhatu* and *Mala*.^[1] Among former mentioned elements *dosha* and *mala* are the principal physiological entities. *Dhatu*s are most stable constituents of the body and formed the basic structural architecture of the body. *Rasa*, *Rakta*, *Mansa*, *Meda*, *Asthi*, *Majja* and *Shukra* are the seven dhatus they hold the body and also perform specific functions like *Prinan*, *Jivana*, *Lepana*, etc.^[2] Acharya *Sushruta* has mentioned the state of *dhatu samya* as health^[3]. Along with the *dosha dhatu*s are also involved in emergence of diseases. Disease has been referred as *vyadhi* in ayurveda and *Vyadhi* has been defined as the *dhatuvaishamya*^[4]. Our acharyas have broadly catagorised diseases according to *Hetu*, *Sthana*, *Samuthana*, *Sadhyasadhyata* etc. *Charak* devoted a special chapter on the concept of *DhatuPradoshaja vikaras* in *Sutrasthana*^[5]. *Sushrut* discussed the *Dhatupradoshaja vikaras* in the *sutrasthana* but

description is very short^[6]. While *Vagbhata* not used the term separately for the *vikaras* in their text. The term *dhatupradoshajatva* comprises two words 'Pra' a prefix representing the degree (*Prakarshita*) and 'Doshajatva' i.e. vitiation (Involvement of dosha). Any type of disease or *vikara* generated due to vitiated dosha reside in dhatu then it is termed as *dhatupradoshajavikara*. The main aim of this literary and conceptual study is to discuss the concept of *Dhatupradoshajavikara* in detail.

AIM AND OBJECTIVES :

To study in detail the concept of *DhatuPradoshaja vikara* described in classical ayurvedic texts.

MATERIAL AND METHOD :

This is a literary and conceptual based article therefore Ayurvedic texts used in this study are *Charak Samhita*, *Sushrut Samhita*, *Ashtang Hrudaya*, *BhelSamhita* and their available Commentaries. Also dictionaries like *Amarkosha*, *Shabdakalpdruma* are referred for sorting the meaning.

REVIEW OF LITERATURE :

A) The concept of dhatu :

“dha dharanaposhanayo.”

The word dhatu is derived from the Sanskrit root *“Du dhatru”* which means dharana (to support) and poshana (to nourish).

The meaning can be elaborated in following way-

1. *“Dheeyatesarvamasminiti”*^[7]

Dhatu is which supports every thing in the living body.

2. *“Dadhati dhatte va shariram mana: pranam”*

That which supports the *sharir, manas* and *prana* is *dhatu*. *Sushrut* and *Charak* have also accepted these opinions regarding the functional aspects of dhatu.

3. *“Ta ete shariradharanatdhatavaityuchyate”*^[8]

4. *“Sharirdharakatayadhatwantaraposhakataya cha dhatushabenochyante”*^[9]

Several meanings of Dhatu are An element, Primitive matter, An essential constituent of body^[10].

B) Dhatu Poshana :

Food substances drawn from the environment are all *vijatiya* or foreign to body and they should be suitably processed before they are utilised by the *sharir dhatu*s, that is they must be transformed as *sajatiya* or body tissue specific substances. Such *paka* or transformation is made possible by *Jatharagni*, *bhutagni* and *dhatvagni pakas*.

The *pranavayu* whose function is to ingest the food draws it in to the stomach. There the food gets mixed with the digestive fluid, broken up and becomes softened. Then the *jatharagni*

being agitated by *Samanavayu*, digest the food eaten in proper quantity and at the proper time^[11]. The factor like *Ushma*, *Vayu*, *Kleda*, *Sneha*, *Kala* and their appropriate combination promote the transformation of intake food into the body element^[12]. Thus *Jatharagni Paka* leads to the break down or *Sanghata Bheda* of different proximate components of the food and makes them fit for *Shoshana* or Absorption.

The digestion of food by *Jatharagni* results in the break down of food into five distinct *bhautik* groups viz *parthiva*, *apya*, *agneya* etc^[13]. Thus the *agni* which is present in the molecule having predominance of *pruthvi mahabhuta* called *parthivagni*, digest that part of food having dominancy of *pruthvi mahabhuta*. Similar is the case with the *apyagni*, *agneya*, *vayavya* and *akasiya* types of molecules. *Bhutagnipaka* convert the *vijateiya* substance to *sajatiya* form to make it available for assimilation.

Dhatwagnis are seven in number each located in its specific *dhatu*s. After *bhutagnipaka* the *adya ahara rasa* absorbed from the *adho-amashaya* is taken to *Hridaya* with the help of *SamanVayu* and then transported to the *Dhatu*s with the help of *Vyana Vayu*. *DhatuPoshana* is also known as *Suksma Pachana* when the *Ahara Rasa* subjected to the digestion by the *Rasagni* it split up into three *Anshas* (parts)^[14]. The *Sthula anshas* will nourish the *Rasa Dhatu*, *Suksmaanshas* will nourish the *Rakta Dhatu* and residue part will be *Mala Kapha*. Thus in the same way, each *Dhatvagni* present in each *Dhatu* synthesizes and transforms the essential *Rasa Dhatu* required for that particular *Dhatu* or cell from the basic nutrients present in the *Anna Rasa*. Acharya Charak has mentioned that the seven *dhatu*s that are the support of the body contain their own *Agni*, and by their own *Agni* they digest and transform the materials supplied to them to make the substances alike to them for assimilation and nourishment^[15].

C) DHATU PRADOSHAJA VIKARA MEANING :

The term *DHATU PRADOSHAJA VIKARA* consists of three terms togetherly.

1. **Dhatu** : Meaning of this term has already been defined & discussed in the previous pages.

2. Pradoshaja :

Pradosha-Prakrushtodoshoyasyeti^[16]

Ja- Jayati jayate va

Different Meanings of *Pradoshaja* -

Disordered condition^[17], Defect, Fault

3. Vikara-Prakrutianyarupeparinamed^[18], Prakrutianyabhavd^[19]

Different Meanings of *vikara*- Transformation, Alteration, Modification, Disease, Sickness^[20]

In *Charak Samhita* in *Vividha Shitapitiya Adhyaya* the description of *Dhatu Pradoshaja Vikaras* and its Principle of Management is available. *Sushrut* has explained the *Dhatu Pradoshaja Vikara* in *Vyadhisammudeshiya Adhyaya* but not the Principle of Management. In *Bhel Samhita* 'Dhatu Vyapattijanya Vikaras' is the term used for *Dhatu Pradoshaja Vikaras* in *Sutra sthana*.^[21]

D) DHATU PRADOSHAJAVYADHI :

<i>Rasa Pradoshaja</i>	<i>Charak</i>	<i>Sushrut</i>	<i>Bhel</i>	<i>Rakta Pradoshaja</i>	<i>Charak</i>	<i>Sushrut</i>	<i>Bhel</i>
<i>Ashraddha</i>	+	+	-	<i>Kushtha</i>	+	+	+
<i>Aruchi</i>	+	+	-	<i>Visarpa</i>	+	+	+
<i>Asyavairasya</i>	+	+	-	<i>Pidaka</i>	+	+	-
<i>Arasadnyata</i>	+	-	-	<i>Raktapitta</i>	+	+	-
<i>Hrullasa</i>	+	+	-	<i>Asrugdara</i>	+	+	-
<i>Gaurava</i>	+	+	-	<i>Guda, Medhra, Asyapaka</i>	+	+	-
<i>Tandra</i>	+	-	-	<i>Pleeharoga</i>	+	+	-
<i>Angamarda</i>	+	+	-	<i>Gulma</i>	+	+	-
<i>Jwara</i>	+	+	-	<i>Vidradhi</i>	+	+	-
<i>Tama</i>	+	-	-	<i>Nilika</i>	+	+	-
<i>Pandutva</i>	+	+	-	<i>Kamala</i>	+	-	-
<i>Strotorodha</i>	+	+	-	<i>Vyanga</i>	+	+	+
<i>Klaibya</i>	+	-	-	<i>Piplava</i>	+	-	-
<i>Angasada</i>	+	+	-	<i>Tilakalaka</i>	+	+	-
<i>Krushangata</i>	+	+	-	<i>Dadru</i>	+	-	-
<i>Agninasha</i>	+	-	-	<i>Charmadala</i>	+	-	+
<i>Valaya</i>	+	+	-	<i>Shwitra</i>	+	-	-
<i>Palitya</i>	+	+	-	<i>Pama</i>	+	-	+
<i>Avipaka</i>	-	+	+	<i>Kotha</i>	+	-	-
<i>Trupti</i>	-	+	-	<i>Astramandala</i>	+	-	-
<i>Hrudroga</i>	-	+	-	<i>Mashaka</i>	-	+	-
<i>Visuchika</i>	-	-	+	<i>Nyachha</i>	-	+	-
<i>Alasaka</i>	-	-	+	<i>Indralupta</i>	-	+	-
<i>Pittadaha</i>	-	-	+	<i>Vatashonita</i>	-	+	-
<i>Vilambika</i>	-	-	+	<i>Arsha</i>	-	+	-
<i>Anyedushka</i>	-	-	+	<i>Arbuda</i>	-	+	-
<i>Satata</i>	-	-	+	<i>Angamarda</i>	-	+	-
<i>Tritiyaka</i>	-	-	+	<i>Kachhu</i>	-	-	+
<i>Chaturthaka jwar</i>	-	-	+	<i>Vicharcika</i>	-	-	+
<i>Lohita Pitta</i>	-	-	+				
<i>Raktarsha</i>	-	-	+				
<i>Pralepaka</i>	-	-	+				
<i>Vipadika</i>	-	-	+				

<i>Mansapradoshaja</i>	<i>Charak</i>	<i>Sushrut</i>	<i>Bhel</i>	<i>Medapradoshaja</i>	<i>Charak</i>	<i>Sushrut</i>	<i>Bhel</i>
<i>AdhiMansa</i>	+	+	-	<i>Jatili Bhavam Kesheshu</i>	+	-	-
<i>Arbuda</i>	+	+	+	<i>Asyamadhurya</i>	+	-	-
<i>Kila</i>	+	<i>Arsha +</i>	+	<i>Kara Pada Suptata</i>	+	-	-
<i>Galashaluka</i>	+	-	-	<i>Kara Pada Daha</i>	+	-	-
<i>Galashundika</i>	+	+	-	<i>Mukha Talu Shosha</i>	+	-	-
<i>PutiMansa</i>	+	-	+	<i>Pipasa</i>	+	-	+
<i>Alaji</i>	+	+	+	<i>Alasyam</i>	+	-	-
<i>Gandamala</i>	+	+	-	<i>KayachidreshuUpadeha</i>	+	-	-
<i>Galaganda</i>	+	+	+	<i>Paridaha</i>	+	-	-
<i>Upajivhika</i>	+	+	-	<i>Anga Suptata</i>	+	-	-
<i>Adhijivha</i>	-	+	-	<i>Pipilika Mutrabhi Saranam</i>	+	-	-
<i>Upakusha</i>	-	+	-	<i>Nidra</i>	+	-	+
<i>Mansa Sanghata</i>	-	+	-	<i>Tandra</i>	+	-	-
<i>Oshtha Prakopa</i>	-	+	-	<i>Sharira Gandha</i>	+	-	+
<i>Ajaka</i>	-	-	+	<i>Granthi</i>	-	+	-
<i>Jatula</i>	-	-	+	<i>Medo Vruddhi</i>	-	+	-
				<i>Galaganda</i>	-	+	-
				<i>Arbuda</i>	-	+	-
				<i>Medoja Oshtha Prakopa</i>	-	+	-
				<i>Madhumeha</i>	-	+	+
				<i>Sthaulya</i>	-	+	+
				<i>Atisweda</i>	-	+	+
<i>AsthiPradoshaja</i>	<i>Charak</i>	<i>Sushrut</i>	<i>Bhel</i>	<i>MajjaPradoshaja</i>	<i>Charak</i>	<i>Sushrut</i>	<i>Bhel</i>
<i>Adhyasthi</i>	+	+	+	<i>Parvanam Ruk</i>	+	-	-
<i>Adhidanta</i>	+	+	-	<i>Bhrama</i>	+	+	-
<i>Dantabheda</i>	+	-	+	<i>Murchha</i>	+	+	+
<i>Dantashula</i>	+	-	+	<i>Tamodarshana</i>	+	+	+
<i>Asthibheda</i>	+	-	-	<i>Arunsham</i>	+	-	-
<i>Asthishula</i>	+	+	-	<i>Parvanam Gauravam</i>	+	+	-
<i>Vivarnata</i>	+	-	-	<i>Netrabhishandya</i>	-	+	-
<i>Kesha, Loma, Nakha, ShmashruDosh</i>	+	-	+	<i>Uru, Jangha Gauravam</i>	-	+	-
<i>Asthi Toda</i>	-	+	-	<i>Apatanakam</i>	-	-	+
<i>Kunakha</i>	-	+	-	<i>Vidaha</i>	-	-	+
				<i>Mada</i>	-	-	+
				<i>Unmada</i>	-	-	+

<i>Shukra Pradoshaja</i>	<i>Charak</i>	<i>Sushrut</i>	<i>Bhel</i>	<i>Shukra Pradoshaja</i>	<i>Charak</i>	<i>Sushrut</i>	<i>Bhel</i>
<i>Klaibya</i>	+	+	-	<i>Vandhyatva</i>	+	-	-
<i>Apraharshanam</i>	+	+	-	<i>SukraDosa</i>	+	+	-
<i>AlpaAyu</i>	+	-	-	<i>Sukrasmani</i>	-	+	-
<i>Virupa</i>	+	-	-	<i>Sukrameha</i>	-	+	-
<i>GarbhaPata</i>	+	-	-	<i>Kshara, Agni, Manjistha, Haridra Varna Shukra</i>	-	-	+
<i>GarbhaSrava</i>	+	-	-	<i>Mehana Bhasma Varna</i>	-	-	+

RasaPradoshaja :

Total 33 Vyadhis are mentioned by the three Acharayas. Sushrut mentioned *Panduroga* instead of *Pandutva*. Bhel mentioned the types of *Jwara* while both *Charak* and *Sushrut* mentioned only *Jwara*. Bhel has also mentioned *Raktarsha* and *Vipadika* as rasa Pradoshaja Vikara while Sushrut mentioned arsha in *Rakta Pradoshaja vyadhi*. The vikaras like *Tandra*, *Jwara*, *Pittadaha*, *Valaya*, and *Palitya* can be categorised under both *Lakshana* as well as *Vyadhi*.

RaktaPradoshaja :

Total 29 Vyadhis are explained by Acharayas as *RaktaPradoshaja Vikaras*. *AngaMarda* is mention in both *RasaPradoshaja* and *RaktaPradoshaja Vikara* by *Sushrut*. Bhel has mentioned the *Kushtha* and *Vicharchika* separately in *Rakta Pradoshaja Vikaras*. The Vikaras like *Pidaka*, *Kotha* can be categorised under both *Lakshana* and *Vyadhi* while *Astra Mandal*, *Guda Medhra Paka* etc. can be categorised in *Lakshana* only.

MansaPradoshaja :

Total 16 Vyadhis are explained as *MansaPradoshaja Vikaras*. *Sushrut* has used the word *Arsha* instead of *Kila*. *Arbuda* has been mentioned by *Sushrut* in both *RaktaPradoshaja Vikara* and in *MansaPradoshaja Vikaras*. *Ajaka* and *Jatula* vyadhis are mention by bhela but exact nature of these vyadhis is unstated. Only *AdhiMansa* has a dual nature i.e. *Lakshana* and *Vyadhi*. *PutiMansa* and *Mansa Sanghata* can be categorised as *Lakshana* while others are *Vyadhi*.

MedaPradoshaja :

Total 22 Vyadhis are explained by Acharayas as *Meda Pradoshaja Vikaras*. *Charak* has mentioned the Purvarupa of *Prameha* as *MedaDhatupradoshaja vikara* while *Sushrut* and *Bhel* mentioned *Prameha* as *MedaPradoshajaVikara*. *Sushrut* described *OsthaPrakopa* in *MansaPradoshajaVikara* while *MedojaOstha Prakopa* as *Meda Pradoshaja Vikara*. *Tandra* is explained by *Charak* in both *RasaPradoshaja* and *MedaPradoshaja Vikaras*.

AsthiPradoshaja :

Total 10 Vyadhi are described as *Asthi Pradoshaja Vikaras* by the Acharayas. Bhel mentioned *Dantaroga* in place of *Dantabheda* and *Danta Shula*. Bhel used *KeshaShmashruPatana* in preference to *KeshaShmashruDosa*. Only *Kesha,ShmashruDosa*, can be categorised under

both Lakshana and Vyadhi. While Adhyasthi, Adhidanta, Kunakha etc. said to be Vyadhi. Rest of all can be categorised as Symptom.

MajjaPradoshaja :

Total 12 Vyadhi are mentioned as Majja Pradoshaja Vikaras. Charak mentioned Parvanam Ruka while Sushrut described Parvanam Gauravamin Majja Pradoshaja Vikara. *Tamodarshanais* described by Charak both in RasaPradoshajaVikara andMajjaPradoshajaVikara. *Murcha* and *Mada* have two fold natures i.e. Symptom and Vyadhi while *Arunshika*, *Unmada*, and *Netrabhishyanda* etc. are categorised as Vyadhi.

ShukraPradoshaja :

Total 12Vyadhis are explained by the Acharyas as ShukraPradoshaja Vikara. Bhasma varnamutrapravrutti has been mentioned by Bhela inShukraPradoshaja vikara. No ShukraPradoshajaVikara has two fold natures. Vikaras such as Aharshana, ApatyaVikrti and Sukra Varna Dusti can be considered as Lakshana.

DISCUSSION :

When there is a healthy relationship between Dhatu and Dosha a person is said to be healthy one, but when Dosha provoked by the etiological factors vitiate Dhatu the pathogenesis starts. Manifestation of any disease depends upon the quality of Dhatu present in the body and the quality of Dhatu depends upon the nutrition, they draw from ahar rasa.

Transformation is made possible by the biochemical entities present in the body i.e. Jatharagni, Bhutagni and Dhatvagni. The nourishment of the body depends upon the nutrition action of Jatharagni. The derangement of Jatharagni results into disease condition. Dhatvagni plays an anchor role in the manifestation of disease because DhatuVaisamyia i.e. (DhatuVruddhi or DhatuKshaya) condition depends upon the nature of Dhatvagni present in the body. Thus Excellancy of Dhatu depends upon the status of Dhatvagni. The imbalance at the level of Dhatvagni will hamper the nourishment of the Dhatu, such inferior quality of Dhatu becomes vulnerable to any affliction.

“Pradoshajatva” is nothing but the deviation from normalcy i.e. “SwaPrakrtiViparita”.

When the Dhatus are extremely vitiated by the Doshas then it is called as “DhatuPradoshaja Vikaras”^[22]. Charak and Sushrut impart special importance to this concept by describing the concept in Sutrasthana. In Bhel Samhita a different term is used for Dhatupradoshaja vikaras i.e. “DhatuVyapattijanya Vikaras”. According to Bhel Samhita, the Rasa Dhatu plays an anchor role in the production of DhatuPradoshaja Vikara.

In case of Dhatupradoshaja vikaras there is either DhatuVruddhi or DhatuKshaya For Example in case of AsthiPradoshaja Vikaras some Vyadhis show DhatuVruddhiLakshana like Adhyasthi, Adhidanta etc. while some shows the Kshaya Lakshana of that Dhatu eg. Asthisula and Dantabheda etc.

DhatuPradoshajaVikaras show bifold nature i.e. they may appear as Vyadhi or Lakshana. For Example Tandra is described as Vyadhi and also at some places described as Lakshana.

Vyadhi which has been mentioned as the symptom of diseases may appear as independent disease also. There they are called disease and not symptom.

The need behind explaining the DhatuPradoshajaVikaras separately is to decide the treatment and Prognosis. i.e. Cikitsa dnyanartha and Sadhyasadyatva Bodhartam. Cakrapani in his commentry on VidhiShonitiya Adhyaya said that in some cases only Dosh Viparita Cikitsa will not bring complete relief to the patient. The term "*AshryaPrabhava*" is used to indicate the significance of Dhatu in the treatment.^[23] Charak has given importance to RaktaDhatu in VisarpaCikitsa^[24]. In Visarpa there is VaisheshikaDushti of RaktaDhatu which leads to unbearable pain so in treatment part separate measures should be done for the vitiated RaktaDhatu, therefore blood letting is advised in Visarpa Chikitsa.

The Management Principle for DhatuPradoshaja Vikaras is explained by Charak separately.

CONCLUSION :

Dosha, dhatu, mala and agni in the prakrut state maintain the healthy condition of the body. Deranged dosha, dhatu, mala and agni may lead to disease condition. DhatuPradoshaja Vyadhi are nothing but the group of symptoms exhibited due to vitiation of Dhatu by Dosha. While treating dhatupradoshaja vikara it is necessary to consider involved dosha, dhatu bala, state of agni and two fold nature of the dhatupradoshaj vikara.

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Review :



Review of Tarpan Vidhi - Ayurvedic Ocular Therapeutic

Vd. Priti R. Rode 1*, Vd. Suvarna P. Golecha 2*

1. PG Scholar 2. Reader in Shalakyatantra Department
S.V.N.H.T.'s AyurvedMahavidyalaya Shrishivajinagar, Rahuri.
*CORRESPONDING AUTHOR : Priti R. Rode, PG Scholar,
S.V.N.H.T.'s Ayurved Mahavidyalaya, Rahuri, MUHS Nashik,
Email id: pritikhade07@gmail.com Mob no. : 8275300026

ABSTRACT :

Ayurveda is one the oldest scientific medical system in the world with long record of clinical experiences. Ayurveda is a way of life that teaches us how to protect and maintain health. Eyes are most important organ in UrdhwajatrugataSthanas which is Adhithana of Darshnendriya. UrdhwajatrugataVyadhis includes the diseases of eyes, ear, nose and throat. Among all of them eye is only organ whose anatomy, diseases and their treatment are describe in Uttartantra of SushrutaSamhita. Kriyakalpa is main therapeutic process for NetraRoga. Among the many contributions of Ayurveda in drug delivery systemKriyakalpahas a very superior position as it is tissue targeted, fast acting, simple but innovative method of drug administration to various parts of eyes. Tarpan is one of the Kriyakalpa and its indications, probable mode of action and its importance in Netraroga will be discussed in present review article.

KEY WORDS: Ayurveda, Kriyakalpa, Netra, Netra-roga, Tarpan, UrdhwajatrugataVyadhis.

NO. OF REFERENCES: [17]

INTRODUCTION

Good vision is crucial for social and intellectual development of a person. The importance of Netra in all sense organ is described in Ayurveda as "Sarvedriyanamnayanampradhanam"^[1]. Ancient Indian philosophy is of opinion that all materials, living or non living are made up of five fundamental element called Panchamahabhutas and all body parts made up by the combinations of these Mahabhutas. In case of Netra, there is dominance of TejaMahabhuta therefore Netra organ has always a threat of KaphaDosha^[2]. Eye is the seat of Alochak Pitta. As quoted in AshtangHridaya, sincere efforts should be made by every individual to preserve his/her vision till the last breath of life because for an individual who is blind, day and night are the same and this beautiful world is of no use to him even if he possesses a lot of wealth^[3].

In Ayurvedicsamhitas the local treatment procedure of Netra are explained in the name of NetraKriyakalpa. As Panchakarma is base of Kaychikitsa; Kriyakalpa is the main therapeutic process for ophthalmology in Shalakyatantra. Kriyakalpa is built from two words Kriya and Kalpa. Kriya means therapeutic procedures used to cure the diseases and Kalpa means

practical possible manner of acting prescribed rule so Kriyakalpa means specific formulations used for therapy in Ayurvedic Netrachikitsa. Acharya Sushruta has described in details eye in Uttartantra. To explain local therapeutic procedure for eye disorder Acharya Sushruta explained separate chapter name Kriyakalpa Adhyaya in Uttartantra.

Acharya Sushruta mentioned five Kriyakalpa as Seka, Aschotan, Anjan, Tarpan and Putpak^[4]. Acharya Sharangdhar mentioned seven Kriyakalpas five of them are same as Sushruta and added Pindi and Bidalak^[5]. Acharya Charak mentioned three Kriyakalpas in Chikitsa Sthanai.e. Bidalak, Aschotan and Anjan^[6]. Among all Kriyakalpas Netra Tarpan is the foremost procedure for eye disorders. It is both preventive and curative therapy for maintaining normal healthy condition of eye. It is Bruhaniya in nature.

TARPAN :

Word Tarpanis derived from root 'trup' by adding 'lyut' pratyaya. The literary meaning of Tarpan is to give nourishment to the eye improves and strengthen Drishti Shakti through Ghrita, Ghrita Manda, Medicated Ghrita, Vasa, Majja, Milk etc.

INDICATIONS OF TARPAN VIDHI :

Vata-pitta predominant diseases, Tamyati (blackouts), Shushka (dryness of eye), Ruksha (roughness of the eyes), Shirma-pakshma (falling of eyelashes), Jihya (deviated eyeball or squint), Avil (dirtiness of eyes), Rog-klishtam (in extreme aggravation of the diseases of the eye), Injury/traumatic condition of eye^[7].

Acharya Vagabhata gives some diseases in which Tarpan is indicated they are Kricchonmilan (difficulty in opening eyes), Sirotpata (episcleritis), Siraharsha (congestion of conjunctival blood vessel), Tama (blackouts), Arjuna (subconjunctival haemorrhage), Adhimanth (glaucoma), Syanda (Conjunctivitis), Avranashukra (corneal opacity), Anyatovata (referred pain in the eyes or sphenoidal sinusitis)^[8].

PROCEDURE OF TARPAN VIDHI :

Before Tarpan appropriate Shodhankarma is carried out. After that Sthanik Mridu Swedan is done. For Tarpan patient is made to lay supine position in good lighted, ventilated room free from dust and smoke. Then the eyes are encircle with firm, compact leak proof pali (wall) made up of paste of powdered Masha. According to Vagbhatapali is made upto the height of two Angules. The patient is asked to close the eyes and over the closed eyes, ghrita processed with appropriate drugs and liquified in lukewarm water should be poured to the orbit, till the level of tip of eyelashes. Patient is asked to open and close the eye intermittently and steadily.

After retaining of ghrita for a stipulated period, it is drained out through a hole made at the bottom of dough wall near outer canthus of eye and irrigated with lukewarm water fomentation. The Kapha which has already been stipulated by the potency of ghrita should be eliminated by shirovirechan (nasya) and fumigation (dhoompana) with the kapha suppressive drugs. Patient is instructed to keep away from exposure to bright light, wind, sky, mirrors and luminous bodies^[9].

SNEHDHARANKALA

Snehधारankala is implemented considering Adhithana of diseases and Severity of doshaprakopa^[10].

Adhithana of diseases Snehधारankala Doshprakopa Snehधारanakala

Vartmagata-roga	100 matra	Healthy eye	500matra
Sandhigata-roga	300matra	Kapha predominance	600matra
Shuklagata-roga	500matra	Pitta predominance	800matra
Krushnagata-roga	700matra	Vata predominance	1000matra
Sarvagata-roga	1000matra		
Drishtigata-roga	1000matra		

(According to Sushrutacharya one matra means time required to pronounce one Guru varna^[11].)

TARPAN AVADHI :

According to AcharyaSushrutaTarpān should be perform for one day, three day or five day or till the thesamyakatarpītalakshnas are seen without clarifying the condition of eyes^[12].

AcharyaVagbhata gives avadhi of Tarpān according to vitiation of doshas, in vitiation of Vatadoshatarpān should be done daily, in Pitta dosha alternate day, in Kaphadosha and Swastha (healthy eye) with an interval of two days or till the eyes become samyakatarpī^[13].

SAMYAK TARPITA LAKSHNAS :

Sukhaswapana(good sound sleep), Avbodhana(blissful awakening), Vaishadhya(clearness of eyes), Varnapatava(discernment of individual colours), Nivriti(feeling of comfort), Vyadhividhwansa(cure of the disease), Kriyalaghavama(easiness in closing and opening the eyes)^[14].

HEEN TARPITA, ATI TARPITA LAKSHANAS AND THEIR TREATMENT :

Rukshata(dryness of eyes), Avilata(indistinct vision), Ashrusrava(lacrimation), Asahamroopdarshan(difficulty in vision), Vyadhivruddhi(aggravation of disease) these are heentarpītalakshanas^[15].

Netragaurav(heaviness in eyes), Avilata(dirtiness), Atisnigdhatā(excessive oiliness), Ashrusrava(lacrimation), Upadeha(stickiness), Kandu(itching), Doshā-samutklishta(aggravation of doshas) these are atitarpītalakshnas^[16].

According to predominance of doshasDhoompana, Nasya, Anjana, Seka are to be done for both heen and atitarpīta conditions. Snigdhasēka in Vata predominance, Sheet sēka in Pitta predominance and Rukshasēka in Kapha predominance doshas^[17].

MODE OF ACTION OF TARPANA :

Various medicines used in Kriyakalpas are absorbed through Akshikosha(eye lids and orbit), Sandhi(junctional area), Sira(blood vessel), ShringatakaMarma(vital point), Ghrana(nasal

region), Asya(oral cavity), Strotas(minute channels). This absorption of medicine will expel vitiated doshas. In Tarpan the oily(ghrita) substance is kept in eyes for a specific time by special arrangement. Ghrita is supreme in Jangamasneha and is Balavardhaka, Ojovardhaka, Vayasthapana, Agni deepan and Dhatuposhak. By virtue of its Sanskaranuvartan property, it attains the properties of ingredients without losing its own.

Ghrita is used as medicine which is the form of suspension. So its particles do not leave the eye and contact time is more and more drugs are absorbed. It will cross corneal epitheliumbarrier easily due to its liophilic property. In Tarpana most medicine is absorbed through cornea and conjunctiva. Corneal epithelium and endothelium are lipophilic so only fat soluble drug readily penetrates. Stroma is hydrophilic hence only water soluble drugs can penetrate the stromal layer. To penetrate all layer of cornea drug should be hydrophilic as well as lipophilic in nature and in Tarpan we use medicated ghrita which is hydrophilic as well lipophilic in nature so it will easily cross all layers of cornea.

CONCLUSION

The eye is precious gift from God to human beings so sincere efforts should be made by every individual to preserve vision. For the eye disorders local therapeutic procedure is as much important as systemic management. The main aim of any pharmaco therapeutics is the attainment of an effective concentration at the site of action for a sufficient period of time to elicit the response. Various drugs can be selected according to the doshas, type of diseases and can be used in various ways by Kriyakalpa. NetraTarpan karma is one of the local therapeutic procedure which is promptly used shows objective evidences of excellent response. Through all the above explanations and observations it is very obvious to conclude that Tarpan plays a very important role in netrarogachikitsa.

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Review :



Role of Kriyakalpa in Netra-Roga chikitsa

Dr. Kaustubha Vasant Ghodke¹, M.S.-Scholar (Netraroga- Ayu)

Mail i.d.- drkaustubha@gmail.com, Contact- 08087164961.

Dr. Nabha S. Balshetwar², M.D. (Shalakyatantra), Reader,

Mail i.d.- drnsbalshetwar@gmail.com, Contact- 09822532631

Dr. Chandrashekhar N. Mule³, M.D. (Shalakyatantra), Ph.D. Guide (M.U.H.S.) Professor & HOD

Mail i.d.- drcnm05@gmail.com, Contact-09175800710.

Institute- Dept. of Shalaky Tantra, Yashawant Ayurveda College Post Graduate Research & Training Centre, A/P- Kodoli, Tal- Panhala, Dist- Kolhapur, Maharashtra, India.

ABSTRACT :

Ayurveda is one of the oldest scientific medical systems in the world, with detailed clinical experience, and case study. One can say *Ayurveda* is one of the great gifts of ancient India to the whole mankind. However, it is not only a system of curing disease but also a way of life that teaches us how to protect and maintain our health.

As Shalaky Tantra deals with organs in *Urdhwajatrugata Sthana* (part of body above the sternal notch), our eyes are the most important among them. We have to protect and take proper care of these delicate organs. *Urdhwajatrugata vyadhi* means the diseases of eye, ear, nose and throat. Acharya *Sushruta* has described in detailed about anatomy, diseases and treatment only that of eye, in *Uttar Tantra of Sushruta Samhita*. Eye diseases are treated specially with *Kriyakalpa*. *Kriyakalpa* is main therapeutic process for *Netra roga*. Acharya *Sushruta* has described about *Kriyakalpa* in chapter 18 in *Uttar Tantra of Sushruta Samhita*. In present review article we have discussed different types of *Kriya Kalpa*, their indications, probable mode of action and its importance in *netra roga*. (No of references -10)

Keywords: *Ayurveda, Netra, Kriya Kalpa, Netra Roga, Urdhwajatrugata.*

INTRODUCTION :

Shalaky tantra is one among eight specialties or branches of *Ashtang Ayurveda* which includes *Urdhwajatrugata vyadis*¹. *Ayurveda* says Eyes are Pradhana Indriya (chief sense organ)² among all *Urdhwajatrugata Indriya*. In *Ayurvedic Samhitas*, the local treatment procedures of *Netra* are elaborated as *Netra Kriya Kalpa*. The word *Kriyakalpa* is built from *Kriya* and *Kalpa*. *Kriya* means therapeutic procedures used to cure the diseases and *Kalpa* indicates the specific formulations adopted for the therapeutic procedures. Hence, the word *Kriyakalpa* literally means to perform proper local treatment procedure for Eye. It deals with selection of drug, specific procedure, preparation of special drug form and finally its proper application to eye. Acharya *Sushruta* mentioned five *Kriyakalpa* i.e *Seka, Aschyotana, Anjana, Tarpana* and *Putpaka*³ Acharya *Charaka* mentioned three *Kriyakalpa* in *chikitsa Sthana* i.e *Bidalaka, Aschyotana* and *Anjana*⁴. Acharya *Sharangadhar* mentioned seven *Kriyakalpa*; five of them are same as by Acharya *Sushruta* while *Pindi* and *Bidalaka* are added to them⁵.

INDICATION OF KRIYA KALPA :

Tarpana- It gives nourishment to the eyes and cures the *vata – pitta vikaras* it is indicated mainly in *Tamiyati, Rukshata* (dryness, roughness), *Shushka- Netra*(dry eye), *Ati-daruna* (hardness of eye lids)- *Pakshmpat* (hair fall from eye lashes) ⁶.

Putapaka- Indication for Putapaka is same as *tarpana*⁷.

Seka- Acute conditions in eye are indicated to treat with Seka.

Ashchyotana- It is stated as first procedure in all eye diseases⁸.

Anjana- *Anjana* has *Lekhan* (scraping) property. When *doshas* are located only in eye and the signs - symptoms just appeared, it is indicated to treat with *Anjana*.

Pindi- It is indicated in *Abhishyanda, Adhimanth*⁹. It is also known as *Kavalika*.

Bidalaka- In early stage of diseases Bidalaka is indicated. It is also called as *Varthma lepa* (application to eye lid).

OCULAR PHARMACOLOGY :

There are four basic methods¹⁰ by which we can deliver Ocular pharmaco-therapeutics.

1. Topical instillation of drug in to conjunctival sac as in the form of drops / ointment / gel or ocuserts.
2. Peri ocular injection – these include Subconjunctival, sub-tenon, retro- bulbar and peri bulbar injection.
3. Injection in intra ocular route- these are intra-cameral injection (into anterior chamber) intra-vitreous injection (into vitreous cavity)
4. Systemic administration –in the form of oral antibiotics and steroids.

The simplest and most convenient method of topical application is Eye drops. One can instil eye drops in two forms i.e. aqueous solution and aqueous suspension. When we use drops as solution, they are totally dissolved but tears immediately dilute them and drain in to Naso Lacrimal Duct. Whereas in suspension the drug is kept suspended in aqueous medium and it presents as small particles. So in suspension form tissue contact time is higher than solution. Hence Ointments and gel are having higher bioavailability of drugs as they have more tissue contact time and dilution and drainage of active ingredients is prevented. In ocuserts form drug delivery is done through membrane. These can be placed in upper or lower fornix. As corneal epithelial junction is tight one and there is lipid –water-lipid sandwich layer, these two provide mechanical and chemical barrier for this type of drug absorption. Lipo-philic and hydro-philic substances can be effectively delivered as ocuserts. Here the permeability across sclera depends on molecular size and molecular weight.

PROBABLE MODE OF ACTION OF KRIYA KALPA BASED ON OCULAR PHARMACOLOGY –

Tarpana- In this process using special arrangement, the oily (like ghee) substance is kept in eye for a specific time period. We can use simple ghee or oil as medicine which is nothing

but suspension form. So here medicinal particles do not leave the eye with tears etc and contact time is more hence more drugs gets absorbed. Its lipo-philic property enables to cross corneal epithelium barrier easily.

Putapaka- In *Putapaka* medicinal preparation is of *swarasa* (extract) form which is extracted by *Putapaka vidhi* and rest of the procedure is same as that of *Tarpana*. Contact time is same as *Tarpana* but here absorption is more than *Tarpana*. As *Putapaka* is a suspension of both fat and water soluble contents, so it has both lipo-philic and hydro-philic properties to penetrate cornea.

Seka- In *Seka* procedure “medicine is poured on closed eye i.e. on eye lids, continuously from height of *Chatur-angula* (four fingers), for a specific period as per *dosha*”, so the medicine is supposed to be absorbed through skin of lids.

Ashchyotana- Here we put medicated drops into open eye from the height of *dway angula* (two fingers). Mostly decoction form is used as medicine. Here tissue contact time of drug is very less and it get diluted with tears and drained.

Anjana- In this type application of medicine is done to the internal surface of lid margin, ideally from *kaneenika sandhi* to *apanga sandhi* i.e. from medial canthus to lateral canthus using special stick the *Anjana shalaka*. Bioavailability of Anjana is more as it has more tissue contact time.

Pindi- Here we apply medicated paste on eye which is kept in a fresh thin cloth. Medicine is absorbed through skin of lid and probably the heat of poultice, local temperature is raised resulting in local vasodilatation.

Bidalaka- In this particular process we apply medicated paste to eye lids (externally, excluding eye lashes). Medicine is supposed to be absorbed through skin. Probably the mechanical effect of pressure causes vasodilatation and aqueous drainage.

CONCLUSION :

Any pharmaco-therapeutic is supposed to provide an effective concentration, for a sufficient period of time at the site of action so as to bring proper response i.e. relief from disease. As we go through *Ayurvedic* therapeutics and pharmacological fundamentals, for sure we can put forward the *Ayurvedic Kriyakalpa* in modern pharmacological way. As per *Dosha*, type of disease we can chose different drugs as well as different form of therapeutic i.e. *Kriyakalpa*. Considering the excellent *Ayurvedic* approach towards eye treatment and easier application of pharmacological fundamentals to the procedure, we can come to the conclusion that ‘Kriyakalpas are having very important role for treating Netra Roga’.

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Review :

Air pollution - Ayurvedic view

Dr. Mrs. Indapurkar Kavita, M.D., Ph. D. (Ayurved) Prof. and Head Kriya Sharir
Bharati Vidyapeeth Ayurved College Pune. 43.

email id - kavitaindapurkar@gmail.com. Contact : 9890791688

Dr. Mrs. Dhanorkar Akalpita, M. D. Kriya Sharir

Pollution is the effect of undesirable changes in our surroundings that have harmful effects on plants, animals & human beings

Types of pollutions :

- Air Pollution
- Water Pollution
- Marine Pollution
- Soil Pollution
- Thermal Pollution
- Noise Pollution
- Nuclear Hazards

Air pollution - occurs due to the presence of undesirable solid or gaseous particles in the air in quantities that are harmful to human health and the environment. Air may get polluted by natural causes such as volcanoes, which release ash, dust, sulphur & other gases or by forest fires.

Sources of air pollution can be broadly classified into natural & anthropogenic.

The natural sources are dust storm, volcanic eruption, forest fire & pollen. The anthropogenic sources include everything involving human activities e.g. emission from vehicles, industries, etc., these are called as primary pollutants.

Types and sources of air pollution :

There are five primary pollutants that together contribute about 90% of the global air pollution. These are carbon di oxides (CO₂) and (NO₂) nitrogen oxides, sulfur oxides, volatile organic compounds (mostly hydrocarbons) and suspended particulate matter.

The major problem as Industries & vehicles with petrol & diesel was not there in ancient days. Population & crowded cities were also not there. Still there are references of air pollution in our older text.

In those days cooking was done with biomass fuels (like wood, grass, crop residues etc.,)

the domestic burning of these fuels produces many pollutants;

Carakacharya mentioned Dushit vayu laxan —where he clearly stated about the environmental condition, which gets disturbed due to viparit vat vahan, speedily blowing wind, dry wind, unpleasant smell (Pollution by odor) vapor (Bashpa), particle matter, fog, etc.

The same was explained by Sushrutacharya. He in addition explained the causes like Ashni Pat, Dhumaketu (Comate) & Graha which passing by the earth also increases the various viral & bacterial infections. At the antient time Acharyas written about viruses or bacterias as Pishachha, or Rakshas.

Sushrutacharya has mentioned Vyadhi like kalabala pravrutta where he stated about this Ashani pata.

Vagbhatacharya also mentioned the Dushit Vayu lakshan in Sutrasthana Adhyaya of Ashtang Sangraha

Carakacharya has written a separate Adhyaya like Janapadodhwansa where he stated the Dushit Vayu, Jala, Kala, Desha. These are the polluted air, polluted water, pollution of land.

Janapada means the causative factor applicable to all the persons living in the same environment at the same time but depending upon the Prakruti of the person only few people suffer with the disease.

In Sushrut samhita sutrasthan it is mentioned that Dushit Vayu creates Kasa, Shwas, Pratisyaya.

Dalhan also explains that Dushit Vayu when enters through Nasa it creates Shwasa, Kasa, Pratisyaya & Twak Indriyagat rog.

Vayu, Jala, Desha & Kala on which every one is dependent, no one could avoid these.

In Harita Samhita also Dushit Vayu is stated. It is clearly stated that Savisha Vayu is there at Sandhikala of Rutus. Due to exposure to this polluted Vayu man will sufer with Yakshma.

Vagbhatacarya mentioned that Raja, Dhuma Sevan, are causes of Nasaroga.

In Ashtang Sangrah it is mentioned about Dushit Vayu. Dushit Vayu lakshan are almost similar to the lakshan stated by Charak.

But along with these lakshana's Acharya stated that the colour & test of water changes. Birds go away from that Polluted water.

Further he states that due to Dushit Vayu Desha also gets polluted.

The Food which grows from that Dushit Desha is of low quality (Apthyakara).

There is more production of snakes, mouse & fleas. The plant kigdom looses their original properties. The most important thing is Kala Dushti occurs. Viparit^autu lakshan observed.

Ayurvedic remedies :

Daivavyapashraya Chikitsa or treatment is one of the most important treatment in Ayurveda.

The terms Homa -Mani-Mantra etc have been described as different types of treatment, treatment not by medicines but by invoking blessings from supernatural powers referred to as Daivavyapashraya

Agnihotra - (a type of Homa)' Agni' is for "fire" and 'Hotra' for "healing all factors in the ritual play an important role.

At both sunrise and sunset dried cow dung, ghee, and rice are burnt in a pyramid-shaped copper receptacle of a prescribed size, along with the chanting of a mantra. During the burning the pyramid shape and the copper act like a generator to produce negative ions which have a harmonizing effect on both the environment and human well being.

There are many herbs like Tulasi which are useful to prevent air pollution .

The herb Tulsi has been widely known for its health promoting and medicinal value for thousands of years.

Tulsi - is known as "The Mother Medicine of Nature", and "The Queen of Herbs".

In reading these ancient scriptures, we become aware of the utmost importance of herbal medicine for maintaining well-being, preventing disease, restoring health and prolonging life.

It helps the body fight the effects of ongoing stress and also balances the mind, nerves toxins and pollution. It helps to purify the atmosphere.

Tulsi maintains the health of the throat chest and lungs. In fact, it helps to protect the entire respiratory tract. It is an anti-inflammatory.

Kadunimba - In Vanoushadhi Gunadarsha by Vd. Shankar Daji Shastri Pade it is mentioned that Kadunimba purifies the air. Plantation of Kadunimba in public places or in the holi places like Mandir or on roads help in the purification of air.

Gugglu - In Dravya Guòa Vijnyan by Vd. V. M. Gogate it is mentioned that fumigation of Gugglu helps in for the irradiation of bacterias and Viruses and also for the irradiation of bad smell (pollution by odor). In Vanoushadhi Gunadarsha by Vd. Shankar Daji Shastri Pade mentioned that fumigation of Gugglu for the purification of air.

Air pollution occurs due to the presence of undesirable solid or gaseous particles in the air in quantities that are harmful to human health.

Whole world is facing the problem of pollution

So an attempt was made to study the effect of air pollution on MVV (functional capacity of Respiratory system) in different Sharir Prakruti individuals

Study of the functional capacity of respiratory system (MVV) was done with the help of Spiro meter and kymograph .

There is definite effect of air pollution on MVV. In industrial area like Pimpri Chinchwad where the pollution levels are high , the functional capacity of the respiratory system is reduced.

Prakruti wise found that Vata Pradhan Prakruti is more affected as compared to Pitta or Kapha Pradhan Prakruti.

There is definite effect of air pollution on MVV. It is observed that Vata Pradhan Prakruti is more affected.

The most important thing is the preventive and curative major. In ancient time people used to do Agnihotra for the prevention as well as remedy on the air pollution. Plant Tulasi is useful for purification of the atmosphere. It is also useful on Pranavaha Srotas.

Recent researches also proved the good effect of Agnihotra. There is a need to do the further research on this topic.

Effect of Agnihotra on pollution levels with the help of low volume sampler can be studied. Analysis of air using Low Volume Sampler.(Pawan Tara) can be done.

Pawan Tara is a low volume sampler— amount of air collected is low, which helps in collecting and analyzing the air samples

Effect of Pranayam on MVV with the help of spirometer in polluted area can be studied.

A comparative study can be done to find out the effect of Rasayan Chikitsa in highly polluted area.

Prevention is better than cure. Ayurvedic remedies must be studied in a scientific way to overcome the problem of pollution .

Review :



Applied Aspects of Law of Causality In Ayurveda

1) Dr. Sameer Joshi, 2) Dr. Vijay Nandvadekar

1) Dr. Sameer Joshi, Asst. Professor, Dept. Of Kriya Sharir, Gomantak Ayurveda Mahavidyalaya & Research Centre, Shiroda, Goa - 403103.
Email- dr.sameerjoshi@hotmail.com, Mobile - 09923111910.

2) Dr. Vijay Nandvadekar, Asst. Professor, Dept. Of Kriya Sharir, Gomantak Ayurveda Mahavidyalaya & Research Centre, Shiroda, Goa - 403103.
Email-drvijaynandvadekar@gmail.com, Mobile-07507302017

Abstract :

The approach of Ayurveda to the law of causation is somewhat synthetic & it has been adapted to the requirement of Medical science for Example. The principle of Satkaryavada has been utilized to lay down the fundamental principles, while the Arambhavada has been utilized in forming the applied principles of Ayurveda. However the theory of causation in Ayurveda seems to be deeply and predominantly affected by Satkaryavada.

References - (10)

Key words : Satkaryavada, Samkhya, Law of Causality, Avyakta

Introduction :

The seeds of theory of causation seem to be well preserved in Vedic literature, although it took its significance in Darshanika period and except Charvaka, all the schools of Indian Philosophy described this law within the limits of their specific approaches. In western philosophy also this law had been lively discussed since the time of Aristotle. There are four main currents on causation theory in Indian philosophy belonging to Vedant, Buddhism, Nyaya, Vaisheshika & Samkhya systems, & these laws are called as Vivartavada, Shunyavada, Arambhavada & PariG amavada(Satkaryavada) respectively.

Samkhya is one of the six classical Indian Philosophy. It was established by sage Kapil. Samkhya philosophy regards the universe as consisting of two realities; Purusha (consciousness) and Prakriti (primordial root cause). Jiva is that state in which Purusha is bonded to Prakriti through the glue of desire, and the end of this bondage is Moksha. Samkhya denies the final cause of Ishvara (God). Samkhya does not describe what happens after moksha and does not mention anything about Ishvara or God.

Though the existence of a supreme spirit or supreme being is not directly asserted by the Samkhya philosophers; their belief is based on the assumption of existence of souls, on 23 tatvas (atoms or entities) that evolved from Prakriti (nature) into which the Purusha (soul) is instilled although no explanation is given for the instillation procedure or the production of a soul.

The Samkhya system is based on Satkaryavada or the theory of Causation. According to

Satkaryavada, the effect is pre-existent in the cause. There is only an apparent or illusory change in the makeup of the cause and not a material one, when it becomes effect. Since, effects cannot come from nothing, the original cause or ground of everything is seen as Prakriti.

Since non-existent cannot be produced: non-existent is that which does not exist. Since there can be no production of non-existent thing, so an effect does exist (in its cause). In this world we do not see the production of a non-existent object, as oil cannot be produced from sand (wherein oil is non-existent). So since the only an existent object can be produced. The manifest does exist before its production in Nature. Therefore, the effect is existent.

Moreover, the material cause is selected where Upadana is the material cause; on account of selecting it. In this world a man selects the material cause of that thing which he wants. One who wants curd selects milk and not water. Therefore the effect exist.

Since everything cannot be produced from anywhere e.g. Gold cannot be produced from silver, dust, grass ,so the effect is existent because everything cannot be produced from anywhere .Since a potent thing can produce that of which it is capable. Here we see that only the potent thing like the potter can produce an earthen pot from mud with the help of means like mud , wheel, a thread of rags, water etc. Therefore the effect is existent.

Since the effect is of the same nature as the cause for example-Barley is produced from barley and rice from rice. If the effect were not existent, then rice could be produced from barley and as it is not so.

Applied Aspects of Law of Causality In Ayurveda

The approach of Ayurveda to the law of causation is somewhat synthetic & it has been adapted to the requirement of Medical science for Example. The principle of Satkaryavada has been utilized to lay down the fundamental principles, while the Arambhavada has been utilized in forming the applied principles of Ayurveda. However the theory of causation in Ayurveda seems to be deeply and predominantly affected by Satkaryavada.

According to Satkaryavada the effect is only the modification (Parinama) of cause and both are metaphysical realities and are identical, the effect being the cause. Charaka defines birth as the mere transition of one existent thing into another state. This concept of Charaka is based on the Satkaryavada of Samkhya. Charaka has very vibrantly described the fundamentals of Satkaryavada, while dealing with the subject of evolution & dissolution processes (1).

In Sharir sthana chapter one Sushruta explains that “ Out of the unmanifest (the Unevolved, Evolver of all things, the primary germ of nature) man rises to the manifest stage and again sinks into the unmanifest. Passion & delusion having taken possession of him man revolves from birth to death like a wheel”. He further says that those who are attached to triguG as are subject to creation; but not those who are unattached (2).

Sushruta also regards that an effect is uniform in virtue to its precedent cause ‘Karananurupam karyamiti krutva’(3) . Sushruta’s theory of evolutionary process is dependent on the Samkhya

concept of Cause & Effect. According to Sushruta the latent supreme nature i.e. Prakriti is the progenitor of all the creation & its role is the primary factor in working out the evolution of the universe (4).

Charaka seems to adopt in essence the application of Satkaryavada in reference to the diagnostic purposes when he observes that a disease which is at first only an effect of some other causes may act as a cause of other diseases and it may thus be regarded both as an effect & a cause. Therefore there is no absolute difference between a cause & an effect; & that which is a cause may be an effect & that which is an effect may also in turn be a cause (5).

Vridhha Vagabhata went one step further in this respect when he explains,

“As the manifold universe is nothing but a modification of guòas, so all diseases are but modifications of tridoshas or in other words as in the ocean waves billows and foam are seen, which are in reality the same as the ocean so all the diseases are nothing but the tridoshas (6).

Acharya Sushrut in Sharir sthana chapter 1 says the unmanifest is the causative source of all beings, causeless, characterized by satva, rajas & tamas, having eight forms & manifesting cause of the entire universe. It is one of the location of many souls as sea is of watery streams (7).

Avyaktam-mulaprakiti (primordial nature) – the causative source of all beings; ashtatrupam-having eight forms such as Avyakta, Mahat, Ahamkara & five bhutas as established in Samkhya philosophy.

From the Avyakta (Unmanifest), Mahat originates which have same attributes. From such mahat arises Ahamkara. Ahamkara is of three types, Satvik (Vaikarika), Rajasik (Tajijasa), Tamasika (Bhutadi).

Out of them, vaikarika ahamkara in collaboration with Tajijasa ahamkara gives rise to Ekadasha Indriya and Tajijasa & Bhutadi ahamkara gives rise to Panchatanmatra, and from then emanate Panchamahabhuta (8).

According to Charaka the same factors which in their state of wholesome (sampat) combination are responsible for the creation of living beings, in the state of their unwholesome combination are responsible for various diseases (9).

All the examples enlisted above are based on Satkaryavada (PariG amavada) of SaC khya darshan. As Samkhyakara highlights it as:-

“Asadkaranât upâdânagrahanât sarvasambhavâbhâvât
œaktasya œakyakaranât kâranâbhâvât ca satkâryam” (10)

Thus this sort of discussion reveals that Ayurveda has abundantly applied the fundamental Law of Causation of SaC khya for the practical applicability, particularly laying down the basic concepts. Ayurveda made a good use of other schools explaining the law of causation, and highlights its approach regarding the law of causation which is applied for the sake of elimination of disease and distress.

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Review :



To Study The Effect of Apamarg Kashtha Churna (*Achyranthus Aspera Linn.*) For Dantadhawana

Dr. Sandeep (Lecturer Dept. of Swasthavritta, Gaur Brahmin Ayurvedic College, Brahmanwas, Rohtak.)
Email ID : dr.sandeep30@gmail.com, Ph. No.- +91-7357359000)

Dr. Ajay Dahiya (Lecturer Dept. of Sharir Kriya, Gaur Brahmin Ayurvedic College, Brahmanwas, Rohtak.)
Email ID : ajaydahiya_07@yahoo.co.in, Ph. No.- +91-9730443716)

Dr. Nisha Jaglan (PG Scholar, Dept. of Agad Tantra & V. Ayurved, Sri Sai Ayurvedic Medical College &
Hospital (SAMC), Aligarh. Email ID : drnisha2590@gmail.com, Ph. No.- 9888055136)

ABSTRACT :

Due to lifestyle changes, people are unable to follow simple Upkramas of Dincharya like Dantadhawana in daily routine, leading to commonly occurring disease i.e. Dantamala, Dantamalinta, Asyavairasya & Mukhadurghandya. So, problems related to teeth like Dantamala, Dantamalinta, Asyavairasya & Mukhadurghandya are increasing day by day. There are different treatment modalities available for the same, but these are costly. These treatments are not affordable by low socio economic people. Clinical trials on 120 individuals between the age group of 20-50 years of both the sex was carried out using Apamarg Kashtha Churna application for Dantadhawana. Thus from observed data and discussion Tikta, Katu, Tikshana rasa APAMARG is significant in various Oro-dental problems and it increases taste recognizing power. Post Treatment follow up showed reduction in Dantamala, Dantamalinta, Asyavairasya & Mukhadurghandya.

No. of references (16)

KEY WORDS : Dantadhawana, Apamarga kashtha, Oral Hygiene.

INTRODUCTION :

Ayurveda is originated for the proper of maintaining human health its aim is as follows.

In this also first performance is given to the maintenance of health of a person. Because health is very natural phenomenon. If we do not take care of our health, disease occur and to cure a disease is again to maintain health. The science of health is Swasthavritta and its aim is the one who is in healthy condition should maintain his health by following rules for day to day routine. "Swasthavritta " is a science for individual as well as for community. Dinacharya start with getting up in the morning after completing over night good sleep. After waking up one should wash hands, face, go for toilet for defecation and then clean the mouth that is oral cavity. To brush teeth one's teeth is dantadhawana. Teeth form a part of the masticatory apparatus. They masticate the food we eat. Teeth help in mastication, Chewing, biting, and also tearing the food material. If teeth are healthy then only they function properly. For this their cleanliness is must, cleaning of teeth is called dantadhawana As Mukha is one of the main nine openings of our body. It is beginning of important gastrointestinal system of our

body. Mukha swasthya is very essential to remain healthy, because many of the infections start from the Mukha. Teeth are the important part of oral cavity; that is why 'Danta swasthya' is very essential for 'Mukha swasthya'

AIMS AND OBJECTIVES OF RESEARCH :

To assess the effect of Apamarg Kashtha Churna for Dantadhawana as a daily regimen. To assess the overall effect of Apamarg Kashtha Churna in maintenance of oral hygiene. To assess the effect of Apamarg Kashtha Churna in prevention of - Dantamala, Dantamalinta, Asyavairasya & Mukhadurghandya. Identification and prevalence of problems related to oral hygiene.

METHODOLOGY :

Literature: To collect data about Dantadhawana, Apamarga, Mukhaswasthya & pathology related to oral cavity from different Ayurvedic Samhita, Modern texts & Research Papers.

Clinical study: Conducted for the efficacy of Apamarg Kashtha Churna (*Achyranthus Aspera* Linn.) for Dantadhawana on 120 individuals for period of 60 days. These individuals divided in 2 groups 4 observations made by after 15,30,45,60 (Post treatment follow up) days for each group.

INCLUSION CRITERIA

- Individuals between the age group of 20-50 yrs. were selected.
- Individuals of both the sex were selected.
- Individuals having lakshanas Asyavairasya, Dantamalinata, Mukhadaurgandha & Dantamala were also selected.

EXCLUSION CRITERIA

According to Acharya Vagbhatta the patient's having Ajirna, Vamathu, Shwasa, Kasa, Jwara, Trishna, Mukhpaka, Hridroga, Netraroga, Shrioroga and karna roga such individuals will be excluded.

- Individuals Contra indicated for Dantadhawana was excluded.
- Individuals suffering from any oral diseases like Stomatitis, Oral cancers, diseases of teeth and gums etc. were excluded.
- Individuals with any systemic disorder were excluded

SELECTION OF UPAKRAMA :

UPAKRAMA – Dantadhawana

TIME – In morning & at night (after meal)

QUANTITY- 3-6 grams

DURATION- 3 to 5 Min.

FORM - Churna

PROCESS : One should clean teeth properly with help of fingers. Teeth should be cleaned in Vertical Horizontal, & Circular manner. Ayurveda mentioned process as - Adhodantpurvakam - meaning lower teeth should be cleaned and then upper teeth. Resembling that of vertical style of cleaning teeth.

CRITERIA OF ASSESSMENT

1. Mukhadaurgandya

- Grade 0 - No odor present
- Grade 1 - Barely noticeable odor
- Grade 2 - Clearly noticeable odor
- Grade 3 - Strong offensive odor

2. Asyavairasya:-

- Grade 0 - Normal Taste
- Grade 1 - feeling of abnormal sensation of taste for 1 hr.
- Grade 2 - feeling of abnormal sensation of taste for > 1 hr.
- Grade 3 - feeling of abnormal sensation of taste for 1 whole day

3. Saliva ph

- Grade – 0 - Normal – 6 – 7
- Grade – 1 - Mild – 7 – 8
- Grade – 2 - Moderate – 8 – 9
- Grade – 3 - Severe – 9 – 10

4. Dantamalinta :-

- Grade 0 - No Plaque
- Grade 1 - Thin Plaque adhered
- Grade 2 - Moderate deposit of soft deposits within gingival pockets seen by naked eyes.
- Grade 3 - Abundance of soft matter within gingival pockets on tooth & Gingival margin.

5. After taste

- Grade – 0 - No after taste
- Grade – 1 - After taste 1 to 5 mins.
- Grade – 2 - After taste up to 10 mins. to ½ hour
- Grade – 3 - After taste up to ½ to 1 our

6. Dantmala:-

- Grade 0 - None
- Grade 1 - Mild (0-1/4th % of Teeth)
- Grade 2 - Moderate (Above 1/2th % of Teeth)
- Grade 3 - Severe (Above 3/4th of Teeth)

MUKHDAURGANDYA**Group A**

Result	Mean	S.D.	T cal.	t-table	P value
B.T.	2.65	0.587	12.01	4.90	<0.0001
A.T.	0.3	0.470			

Group B

Result	Mean	S.D.	T cal.	t-table	P value
B.T.	2.5	0.487	11.0	3.9	<0.0001
A.T.	1.2	0.440			

Before treatment and after treatment mean value for Mukhdaurgandya is 2.65 and 0.3 respectively.

Calculated value of 't' is 12.01.

Table value for 't' is 4.90.

Since calculated value of 't' is greater than table value, we reject Ho i.e. null hypothesis and accept H1 i.e. alternative hypothesis.

Since 'P' value is < 0.0001 the result is statistically significant.

ASYAVAIRASYA**Group A**

Result	Mean	S.D.	T cal.	t-table	P value
B.T.	2.46	0.743	9.939	5.36	<0.0001
A.T.	0.20	0.414			

Group B

Result	Mean	S.D.	T cal.	t-table	P value
B.T.	2.46	0.743	13.67	5.36	<0.0001
A.T.	0.20	0.414			

Before treatment and after treatment mean value for Asyavairasya is 2.46 and 0.2 respectively.

Calculated value of 't' is 9.93.

Table value for 't' is 5.36.

Since calculated value of 't' is greater than table value, we reject Ho i.e. null hypothesis and accept H1 i.e. alternative hypothesis.

Since 'P' value is < 0.0001 the result is statistically significant.

DANTAMALINTA**Group A**

Result	Mean	S.D.	T cal.	t-table	P value
B.T.	2.66	0.488	11.38	5.36	<0.0001
A.T.	0.4	0.507			

Group B

Result	Mean	S.D.	T cal.	t-table	P value
B.T.	2.33	0.723	10.25	5.36	<0.0001
A.T.	0.33	0.488			

Before treatment and after treatment mean value for Dantamalinta is 2.66 and 0.4 respectively.

Calculated value of 't' is 11.38.

Table value for 't' is 5.36.

Since calculated value of 't' is greater than table value, we reject Ho i.e. null hypothesis and accept H1 i.e. alternative hypothesis.

Since 'P' value is < 0.0001 the result is statistically significant.

DANTMALA**Group A**

Result	Mean	S.D.	T cal.	t-table	P value
B.T.	2.7	0.483	8.837	3.25	<0.0001
A.T.	0.4	0.516			

Group B

Result	Mean	S.D.	T cal.	t-table	P value
B.T.	2.7	0.699	9.0	3.25	<0.0001
A.T.	1.9	0.483			

Before treatment and after treatment mean value for Dantmala is 2.7 and 0.4 respectively.

Calculated value of 't' is 8.83.

Table value for 't' is 3.25.

Since calculated value of 't' is greater than table value, we reject Ho i.e. null hypothesis and accept H1 i.e. alternative hypothesis.

Since 'P' value is < 0.0001 the result is statistically significant.

DISCUSSION :

The Katu & Tikta Rasa helps in Pacifying the kapha Doshha while Ushna Guna help in pacifying the Vata Doshha, thereby removing the Doshha's from the oral cavity. The rubbing of the churna i.e. procedure of rubbing helped in removing the food debris stuck in the teeth. Hence reduces MUKHADAURGANDHYA.

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The Katu & Tikta Rasa helps in Pacifying the kapha Doshha while Ushna Guna help in pacifying the Vata Doshha, there by removing the Doshha's from the oral cavity. The rubbing of the churna i.e. procedure of rubbing helped in removing the food debris stuck in the teeth. Hence reduces MUKHADAURGANDHYA

ASAYAVAIRASYA :

Since Apamarg having tikta rasa, deepan guna and Kapha samshanana karma it reduces ASYAVAIRASYA.

DANTAMALINTA :

Apamarg KashtaChurna having Krimighna & Tikshna properties helped in reducing the dental plaque .

DANTAMALA :

Apamarg having katu Rasa and Ushna ,tikshna gunas reduces food debris. The Katu & Tikta Rasa helps in Pacifying the kapha Doshha there by removing the Doshha's from the oral cavity.

CONCLUSION :

Dantadhawana is one of the important procedures of Dinacharya for maintaining the health of oral cavity. Apamarga Kashtha Churna reduces Dantamala, Mukhadurghandya. Thus from above observed data and discussion Kashaya rasa pradhan Apamarga Kashtha Churna is effective in maintaining healthy dental as well as total oral hygiene, Thus it prevents various problems. As Apamarga Kashtha having KASHAYA, TIKTA RASA, TIKSHA, USHNA GUNA it is effective in improving oral hygiene. And DANTADHAVANA UPKRAMA has significant importance in maintenance of oral hygiene.

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Section : 2

Eye Cancer often goes undetected among Children

When Jayant and his wife Sharmila snapped several photographs of their one-month-old son, they were surprised to notice a white glow in one of his eyes in all the photographs. Immediately the couple took their baby to an ophthalmologist and was told that he had eye cancer (retinoblastoma). As medical intervention was sought early, doctors were able to cure the disease. Not all parents are as fortunate, considering that many do not start timely treatment for retinoblastoma in their children owing to lack of awareness.

Retinoblastoma usually develops in early childhood, typically before the age of five, and is found in one in 15,000 live births in India. The life threatening cancer develops in the retina, which is specialised tissue at the back of the eye that detects light and colour. While the cancer can be cured to a great extent when detected early, in most cases, the medical advice of removing the affected eye prompts parents to abandon treatment. At the mention of chemotherapy and radiation, they disappear with the kid. They do not realise that it is crucial to save their child's life rather than protect them from disfiguration.

Many barriers, ranging from poor awareness to inadequate economic resources result in late detection of eye cancer in children. In addition, lack of good documentation in national cancer registries lead to poor data collection and monitoring. Therefore the true magnitude of the problem is largely unknown.

Another appalling perception in rural areas is that they would rather have another child than spend money to treat a child with cancer.

Poverty aside, ignorance is rampant. While an increasing number of cases could be attributed to awareness, many parents still wallow in myths and do not treat a squint in their child thinking the deformity will bring luck. Many of them end up taking their children to quacks. If parents notice something amiss about a child's eye, they should immediately approach an ophthalmologist.

Retinoblastoma : It is a cancerous tumor of the retina, a layer of nerve tissue in the back of the eye that senses light and sends images to the brain. A cancer of early childhood, it affects children up to 5 years of age.

Causes : While 25% of cases are due to genetic reasons, the exact cause of the cancer is unknown in the rest of the cases.

Types : Intraocular Retinoblastoma - Does not extend beyond the eye.

Extraocular Retinoblastoma - Cancer spreads beyond the eye, to other body parts.

Signs & Symptoms : 1) A cloudy white pupil or white reflex, 2) Poorly aligned or 'wandering' eye, 3) Painful reddish pupil, 4) Larger than normal pupil, 5) Different irises & Decreased vision.

Dignosis : Through physical exaqmination, imaging tests, and blood tests.

Treatment : 1) Chemotherapy, 2) Radiation therapy, 3) Laser therapy, 4) Thermotherapy and 5) Surgery.

Ayurveda Approach :

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Hinge Benefits - Knee Joint

We need our knees to run, walk, squat. With research suggesting our bones are weaker than those of Westerners, here is a quiz to test how well you are caring for your 'hinges'.

Walking, running, climbing, dancing - the knees bear the brunt of every move we make throughout our lives. The main hinge between the ground and the body, knees bring together the femur (thigh bone), tibia (shin bone), fibula (next to tibia) and kneecap, and work as wheels that keep you going.

But since they are bound by a complicated system of ligaments, muscle, tendons and cartilage, knees are highly prone to injury. Research has found that bones of Indians tend to be weaker than their Western counterparts. We are more prone to osteoporosis than Americans and British. Perhaps, that is why the total number of knee replacements in India, both total and partial, has been a huge 30 per cent increase from 2004 to 2008. The same period also saw a 61 per cent rise in these surgeries among men and women ages 45 to 64. It is expected to increase.

Knee pain occurs when the cartilage that covers and acts as a cushion inside the joint, wears out, causing the bones to rub against each other. Healthy knees can make all the difference between a comfortable life and a painful existence. Here is checking how much you know about the crucial joint :

1) 2 out of 3 obese adults suffer from knee osteoarthritis at some point in their life.

A - True

B - False

Answer : A - Excess body mass puts extra pressure on the knee joint, hastening its wear and tear. Being overweight increases the chances of developing osteoarthritis, a common and disabling form of arthritis, in the knee. Joint replacement surgeon Dr. Arvind Malik says, "Excess weight puts extra weight on the joints. People who give a sedentary lifestyle need to lose weight, get active and fit".

2) What is the most effective trick to ensure knee health?

A - Regular cyclical low-impact exercise

B - Maintaining correct body weight through a balanced diet.

Answer : A - Exercise is important even in severe arthritis. If you suffer knee pain, try stationary cycling, walking and swimming instead of high impact exercises. "Static strengthening exercises for quadriceps, hamstring muscles and knee range movements are recommended" says Joint replacement surgeon. Minimise squatting. "When you squat," "there is high load concentration on a small area, that is the knee."

3) What sort of diet keeps your knees in ship-shape through the sunset years?

A - High-carb and fat diet; fats help lubricate the joints.

B - Diet rich in dairy and protein.

Answer : B - Although diet has no direct effect on joints, weight reduction does. Ensure you get your daily requirement calcium and Vitamin D to help combat osteoporosis. Have protein supplements (glucosamine and chondroitin) to strengthen cartilage. "Those suffering from gouty arthritis will benefit from cutting down on food that increases uric acid levels in the blood (red meat),".

4) Why are women more prone to osteoporosis?

A - They wear high heels for long hours.

B - They skip exercise and eat a mismanaged diet.

Answer : B - Orthopaedists have reported an increased number of osteoarthritis patients, especially women over 40 years. Expert lists four reasons for this : "Women tend to be more sedentary/home-bound, tend to squat/sit on the floor more often, and display a higher incidence of obesity. Also, a girl child, especially in rural India, is more likely to be malnourished than a male child."

Deerghayu International supported by

- 1) Ayurveda Yoga Australia
- 2) European Ayurveda Academy
- 3) International Centre for Social and Human Research, Italy (CCILUS)
- 4) International Ayurveda Association
- 5) Sculo Italiana Professor Kulkarni, Ayurveda (SIPKA)

'Indians knew Surgery before Greeks'

Used Science to Build Aircraft, Claim papers on Ancient Texts.

Indians realized the importance of anatomy for accurate surgery and were dissecting the human body long before the Greeks, claims a paper which is to be presented at the 102nd Indian Science Congress.

There are many other such papers lined up for presentation at the Congress which assert the significance of exploring Hindu epics to understand the ancient world. These papers, based on translation and interpretation of various historical documents and texts in Sanskrit, some of which were also published, claim ancient Indians followed scientific principles for building houses and aircraft construction, and developed 20 types of sharp instruments and 101 types of blunt instruments for surgery made of iron. Many of these resemble modern surgical instruments.

"So far, Sanskrit is essentially considered a language of religion and philosophy but the fact is that it also talks about science, including physics, chemistry, geography, geometry etc. There is a lot of scientific information available in these texts and historical documents that we want to explore," Says Gauri Mahulikar, associate professor and head of department of Sanskrit at Mumbai University. Mahulikar is the coordinator for the symposia 'Ancient Sciences through Sanskrit' during the Indian Science Congress, hosted by Mumbai University from January 3rd to 7th 2016. The session is scheduled to be inaugurated by Union Minister of State Prakash Javadekar.

The papers reveal ancient Indians performed complicated medical procedures such as cranial, ophthalmic and even plastic surgeries. They even extracted dead fetuses from wombs and live ones from dead mothers, one of the papers by Ashwin Sawant, an ayurvedic physician, claims.

Sushrut Samhita is the first text of surgery, created not later than 1500 BC in India. References of advanced surgeries are also found in Rig Veda, considered the first text of the universe, created not later than 6000 BC," an extract from Sawant's paper says. According to the paper, Indian method of human dissection seems better, since it could make visible, minute structures just beneath the skin, which is not possible even in modern methods of dissection.

From the many historical documents, it is evident that scientist-sages Agastya and Bharadwaja had developed the lore of aircraft construction.

Findings from Documents :

- References of **advanced surgeries are found in Rig Veda** - Considered as first text of universe and which were created not later than 6000 BC.
- Indians had developed **20 types of sharp Instruments and 101 blunt instruments required for surgeries**. Made from pure iron, many of them resembled modern surgical instruments.
- Indians had performed **7 steps of treatment to heal wound**.
- Knew more than **4 ways to stop bleeding**, crucial for a successful surgery.
- Used **ants for joining dissected Intestines and leeches to suck impure blood** - methods which are accepted in modern surgery in 20th century.
- Performed **cranial and plastic surgeries**, plucked damaged eyeballs, extracted head fetus from womb and even removed live fetus from dead mother.

(Times of India 3.1.2015)

Peer Reviewed Journals

Defination :

An academic journal is peer reviewed periodical in which scholarship relating to particular academic discipline is published.

Peer review means (referred) Refereed

Prof. Scrutinizing a text articles have been evaluated & critiqued by research & experts equals - peers.

"Turmeric Latte" is how the West is quaffing haldi doodh

The standard milk and haldi restorative Indian mothers fix up for sniffing kids is now the hottest beverages from Sydney to San Francisco.

The Guardian reported on its cult following in hip cafes that call it 'Golden Milk' or turmeric latte, a concoction that improves on the original Ayurvedic recipe by replacing dairy with coconut, almost and even cashew milk.

Everyone's in on it. Google's new report on food trends in the US says searches for the spice increased by 56% from November 2015 to January 2016. Apparently fuelling that rise is the root's use in lattes, with 'golden milk' surfacing among the top online searches associated with it.

Its famed health benefits are what appeal to global consumers, for whom Golden Milk is an anti-inflammatory alternative to caffeine drinks. According to the co-founder of Nama, a vegan restaurant in London's Notting Hill, the drink sells particularly well in the mornings, while Modern Baken in Oxford - whose variants include espresso shots, iced lattes, and turmeric biscuits - says turmeric latte outsells all their other lattes.

To those outside the subcontinent whose only acquaintance with turmeric is in a curry, this new manifestation comes as a revelation, and it joins other newly discovered culinary exports from the subcontinent like ghee, dahi and coconut oil. Predicting the trend, market research firm Mintel named turmeric one of the foods to watch in 2016.

Ayurvedic View : Turmeric/Haridra is useful in Pharyngitis, Laryngitis, Cold, Cough. It is anti inflamatory.

Sunday Times of India, Pune
May 15, 2016

Eat Chocolate, keep diabetes away

Consuming 100 gm. of it daily reduces insulin resistance : Research

London : Consumption of a small amount of chocolate each day may help prevent diabetes and insulin resistance, a new study has claimed. Researchers who analysed data of 1,153 people aged 18-69 years found that those who ate 100 gram of chocolate a day - equivalent to a bar - had reduced insulin resistance and improved liver enzymes. Insulin resistance is a well established risk factor to cardiovascular disease, researchers said.

They hypothesised that chocolate consumption may have a beneficial effect on insulin sensitivity and liver enzymes and therefore decided to analyse a national sample of adults, taking into account lifestyle and dietary factors, including the simultaneous consumption of tea and coffee. This is because both drinks can be high in polyphenol, the substance which may provide chocolate with its beneficial cardiometabolic effects, researchers said.

"Given the growing body of evidence, including our own study, cocoa-based products may represent an additional dietary recommendation to improve cardio-metabolic health; however, observational results need to be supported by robust trial evidence." said Saverlo Stranges from University of Warwick, UK.

"Potential applications of this knowledge include recommendations by healthcare professionals to encourage individuals to consume a wide range of phytochemical-rich foods, which can include dark chocolate in moderate amounts." said Stranges.

"However, it is important to differentiate between the natural product cocoa and the processed product chocolate, which is an energy-dense food." he added. More than 80% of participants claimed to eat an average of 24.8 gram of chocolate a day. The study also found that those who claimed to eat chocolate were younger, more physically active and had higher levels of education than those who claimed not to eat chocolate on a daily basis.

"It is also possible that chocolate consumption may represent an overall marker for a cluster of favourable socio-demographic profiles, healthier lifestyle behaviours and better health status," said Alaa Alkrew from Luxembourg Institute of Health. The findings were published in the British Journal of Nutrition.

The Times of India, Pune
Saturday, April 30, 2016

A Common Painkiller Hits Our Ability to Spot Errors

Acetaminophen inhibits Brain's Response : Study

Toronto : A common and effective painkiller, acetaminophen, may impede the brain's ability to detect errors, scientist have found for the first time. The research from University of Toronto and University of British Columbia in Canada is the first neurological study to look at how acetaminophen could be inhibiting the brain response associated with making errors.

"Past research tells us physical pain and social rejection share a neural process that we experience as distress, and both have been traced to same part of the brain," said Dan Randles, a fellow at the University of Toronto.

Recent research has begun to show how acetaminophen inhibits pain, while behavioural studies suggest it may also inhibit evaluative responses more generally.

Previous research has also found that people are less reactive to uncertain situations when under the effect of acetaminophen. For the study, two groups of 30 participants were given a target-detection task called the 'Go or No Go.'

Participants were asked to hit a 'Go' button every time the letter F flashed on a screen but refrain from hitting the button if an E flashed on the screen. "The trick is you are supposed to move very quickly capturing all the GOs, but hold back when you see a No Go," said Randles. Electroencephalogram (EEG) was used to measure electrical activity in the brain of the participants.

The researchers were looking for a particular wave called Error Related Negativity (ERN) and Error Related Positivity (Pe).

Essentially what happens is that when people are hooked up to an EEG and make an error in the task there is a robust increase in ERN and Pe.

One group, which was given 1,000 milligrammes of acetaminophen - the equivalent of a normal maximum dose - showed a smaller Pe when making mistakes than those who did not receive a dose, suggesting that acetaminophen inhibits our conscious awareness of the error. "It looks like acetaminophen makes it harder to recognise an error, which may have implications for cognitive control in daily life." said Randles.

The research was published in the Journal Social Cognitive and Affective Neuroscience.

The Times of India, Pune
Monday, April 11, 2016

Steroid Skin Creams - Caution

Obsession for airness, unblemished skin and facial glow has led to the rampant use of steroid-based skin creams in Pune, say dermatologists.

City based doctors say they have witnessed a significant rise in cases where the prolonged use of such ointments have caused substantial and often permanent damage, especially in areas that have thin skin like the face and groin.

People across all age groups and sexes use these creams, say doctors, adding that the most vulnerale are the 15 to 25 years olds and women between 30 years and 45 years of age.

Experts have demanded that the Union Government should ring these steriod-based creams, except for those with low potency, under schedule H of the Drugs and Cosmetics Act to ensure their production and sale is regulated. "Any steroid-based skin cream would initially relieve symptoms and temporarily mask the underlying skin condition. But, if it is used for a prolonged period, it would have side effects." said dermatologist.

Normally youngsters come to us with complaints of excessive acne or pimple, which is a hormone-dependent skin condition that mainly affects teenagers. They apply steroid-based skin creams which gives them quick relief. So, they keep applying the cream but it eventually results in a flare up of acne after some time.

Any where between 10 and 120 people seek treatment for side effects caused by steroid-based skin creams at the 250-odd dermatologists in a month, say doctors.

The number of patients suffering from side effects following excessive use of these creams has rose phenomenally in the last few years, said dermatologist.

Doctors say using these creams for a short period is okay. But the problem starts with their misuse or abuse when patients buy it on their own without a prescription or when some unqualified doctors prescribe them for any skin condition, irrespective of its usefulness, dermatologist of KEM Hospital. He added that chemists also recommend these creams often, because of which people who buy over the counter medicines, which are irrational and cheap, suffer.

The side effects include thinning of skin, stretch marks, eruption of acne, excessive hair growth, facial redness and sometimes evenm hypertension and diabetes, said dermatologist of Sanjeevan Hospital.

Specialists add that patients with prescriptions who often repurchase the drugs and share them with friends or relatives with similar symptoms are to be blamed. They do this to save money and inconvenience, doctors allege.

The popular myth that no externally applied drug can be dangerous feeds this mentality, said dermatologist at BJ Medical College attached to Sassoon Hospital.

The IADVL, has formed a task force against topical steroid abuse, which seeks to raise public awareness, run media campaigns, form study groups for doctors, highlight the problem in journals and meet government authorities. 'The task force has started to collect data and has asked the drug controller to bring topical corticosteroids under schedule H, disallowing their unrestricted sale, and has demanded explanation as to why irrational combinations are authorised.' said Vadodara based consultant dermatologist.

This high lights the low priority that dermatology received in India. The health ministry's drug technical advisory boards should include more dermatologists to advise the drug controller's office and state representatives.

About 85% of the dermatology market in 2014-15 comprised of steroid cocktails that were fixed dose combinations of topical corticosteroids and one or two antibiotics and antifungals.

Reasons for rampant use :

- In India, all drug combinations are considered new drugs for the first four years and so need approval from the Drug Controller General of India after safety and efficacy data have been presented.
- After approval, state licensing authorities allow manufacture and sale.
- By law, strong corticosteroids such as clobetasol, clobetasone, fluticasone, and mometasone can be sold in India only with a registered medical practitioner's prescription.
- All steroids are included in schedule H of the Drugs and Cosmetics Rules 1945, but a footnote confusingly excludes topical preparations and eye ointments from the list, even though oral forms of these drugs do not exist.
- This means the status of these drugs is interpreted as 'over-the-counter' for all practical purposes.
- This needs urgent revision, demand doctors. Moreover, they allege existing laws are poorly implemented.

The way forward :

- Ban irrational combinations of steroid-based skin creams.
- Chemists must not sell these without proper prescription. They should not be resold or be available over-the-counter.
- Family physicians and non-dermatologists must be made aware of the rational use of these drugs.

Coffee, Wine may be good for your gut bacteria

Drinking coffee, tea and wine may be associated with a healthier and more diverse community of microbes living in the gut, a new study has claimed. The opposite is true for drinking sugary beverages and whole milk, as well as for continually eating snacks and a lot of carbohydrates, researchers from the University of Groningen in the Netherlands said. They analysed the microbes inside the guts of more than 1,100 people. "In total we found 60 dietary factors that influence diversity. But there is good correlation between diversity and health greater diversity is better," said Aledandra Zhemakova from the University.

The Times of India, Pune
Monday, May 9, 2016

Statement by the Publisher [From IV (Rule 8)]

Statement about ownership and other particular about the newspapers to be published in the first issue every year after the last day of February.

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I, Dr. P. H. Kulkarni hereby declare that the particulars given above are true to best of my knowledge and belief.

Date : 1st July 2016

P. H. Kulkarni
(Signature of publisher)

The Oath of Initiation

Charak Samhita (Viman Sthan 8. 13-14)

अथैनमग्निसकाशे बाह्वणसकाशे भिषक्सकाशे चानुशिष्यात्-ब्रह्मचरिणा. श्मश्रुंधरिणा सत्यवादिनाऽ मांसादेन मेध्यसेविना निर्मत्सरेशास्त्राधारिणा च भवितव्यं, न च ते मद्बचनात् किञ्चिदकार्यं स्यादन्यत्र रजद्विष्टात् प्राणहराद्विपुलादधर्म्यादनर्थदनसंप्रयुक्ताद्वाऽप्यार्थात्; मदपणेन मत्प्रधानेन मदधीनेन मत्प्रियहितानुवर्तिता च शश्वद्भवितव्यं, पुत्रवद्वासवदार्थिस्वच्चोपचरताऽतुकस्तव्योऽहम्, अनुत्सेकेनावहितेनानन्यमनसा विनीतेनावेक्ष्यावेक्ष्यकरिणाऽनसूयकेन चाभ्यनुज्ञातेन प्रपिचरितव्यम्, अनुज्ञानतेन (चाननुज्ञातेन च) प्रविचरता पूर्व गुर्वर्थापाहरणे यथाशक्ति प्रयतितव्यं, कर्मसिद्धिमर्थसिद्धि यशोलाभं प्रेत्य च स्वर्गमिच्छता भिषजा त्वया गोब्राह्मणमादी कृत्वा सर्वप्राणभूतां शमः शासितव्यमहरहरूत्तिष्ठता चोपविशता च, सर्वात्मना चातुराणामारोग्याय प्रयतितव्यं, जीवितहेतोरपि चातुरेभ्यो नाभि द्रोग्धव्यं, मनसाऽपि च परस्त्रियो नाभिगमनीयास्तथा सर्वमेव परस्व, निभूतवेशापरिच्छदेन भवितव्यम्, अशौण्डेनापापेनापापसहायेन च, एलक्ष्मणशुल्लधर्मशम्यंथन्यसत्यहितमितवचसा देशकालविचरिणा स्मृतीमता ज्ञानोत्थानोपकरणसंपत्सु नित्यं यत्नवता च; न च कदाचिद्राजद्विष्टांना राजद्वेषिणां वा महाजनद्विष्टांना महाजनद्वेषिणांवाऽप्यौषधमनुविधतव्यं, तथा सर्वेषामत्यर्थविकृतदुष्टःखशीलाचारोपचाराणामनपवादप्रतिकाराणां मुमूर्षूणां च, तथैवासन्निहितेश्वराणां वा; न च कदाचित् स्त्रीदत्तमामिषमादात्तव्यमनुज्ञातं भत्राऽथवाऽध्यक्षेण, आतुरकुलं चानुप्रविशता विदितेनानुमतप्रथेशिनासार्धं पुरुषेण सुसंवीतेनावविक्षरसा स्मृतिमता स्तिमितनावेक्षावेक्ष्यमनसा सर्वचाचरता सम्यगनुपेवेष्टव्यम्, अनुप्रविश्य च वाङ्मनोबुद्धीन्द्रियाणि न कचित् प्रणिधातव्यान्व्यत्रातुरादातुरोपकारार्थादातूगतेष्वन्युषु वा भावेषु न चातुरकुलप्रवृत्तयो बहिनिश्चारयितव्या; हसितं चायुषः प्रमाणातुरस्य जानताऽपि त्वा न वर्णवितव्यं तत्र यत्रोच्यमानमातुरस्यान्यस्य वाऽप्युपघाताय संपद्यते; ज्ञानवताऽपि च नात्यथमात्मनी ज्ञाने विकत्थितव्यम्, आप्तादपि हि विकत्थमानादत्यर्थमुद्विजन्त्यनेके ॥ १३ ॥ न चैवह्यास्ति सुतरमायुर्वेदस्य पारं, तस्मादप्रमत्तः शश्वदभियोगस्मिन् गच्छेत, एतश्च कार्यम् ॥ १४ ॥

The teacher then should instruct the disciple in the presence of sacred five Brahmins and physicians :

'Thou shalt lead the life of a bachelor (Brahmachari) grow thy hair and beard, speak only the truth, eat no meat, eat only pure articles of food, be free from envy and carry no arms. There shall be nothing that thou oughtest not do at my behest except hating the king or causing another's death or committing an act of great unrighteousness or acts leading to calamity.

Thou shalt dedicate thyself to me and regard me as thy chief. Thou shalt be subject to me and conduct thyself forever for my welfare and pleasure. Thou shalt serve and dwell with me like a son or a slave or a supplicant. Thou shalt behave and act without arrogance and with care and attention and with undistracted mind, humanity, constant reflection and with ungrudging obedience. Acting either at my behest or otherwise, thou shalt conduct thyself for the achievement of thy teacher's purpose alone, to the best of thy abilities.

If thou desirest success, wealth and fame as a physician and heaven after death, thou shalt pray for the welfare of all creatures beginning with the cows and Brahmanas.

Day and night, however thou mayest be engaged, thou shalt endeavor for the relief of patients with all thy heart and soul. Thou shalt not desert or injure thy patient even for the sake of thy life or thy living. Thou shalt not commit adultery even in thought. Even so, thou shalt not cover other's possessions. Thou shalt be modest in thy attire and appearance. Thou shalt be modest in thy attire and appearance. Thou shouldst not be a drunkard or a sinful man nor shouldst thou associate with the abettors of crimes. Thou shouldst speak words that are gentle pure and righteous, pleasing, worthy, true, wholesome and moderate. Thy behaviour must be in consideration of time and place and helpful of past experience. Thou shalt act always with a view to the acquisition of knowledge and fullness of equipment.

No person, who are hated of the king or who are haters of the king or who are hated of the public or who are haters of the public, shall receive treatment. Similarly, those that are very unnatural, wicked and miserable character and conduct, those who have not vindicted their honour and those that are on the point of death, and similarly women who are unattended by their husbands or guardians shall not receive treatment.

No offerings of meat by woman without the behest of the husband or guardian shall be accepted by thee. While entering the patient's house thou shalt be accompanied by a man who is known to the patient and who has his permission to enter, and thou shalt be well-clad and bent of head, self possessed and conduct thyself after repeated consideration. Thou shalt thus properly make thy entry. Having entered, thy speech, mind intellect and senses shall be entirely devoted to no other thought than being to helpful to the patient and of things concerning him only. The peculiar customs of the patient's span of life has come to its close, it shall not be mentioned by thee there, were if so done, it would cause shock to the patient or to others.

Though possessed of knowledge one should not boast even much of one's knowledge. Most people are offended by the boastfulness of even those who are otherwise good and authoritative. There is no limit at all to the "Science of Life" or "Ayurveda" So you shouldst apply thyself to it with diligence. This is how thou shouldst act.

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