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(Association of Anesthesiologists of Indian Medicine)

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APPEAL

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Editorial

Dear members of A.A.I.M. we are once again at the same juncture from when we started our struggle to revive Sangyaharan. Many stalwarts e.g. Late Prof.Jyotirmitra, Late Prof. Shri Ram Sharma- Former C.C.I.M. President, Dr. Raghunandan Sharma-Former President C.C.I.M. and the then Advisor of Ayurved Dr. S.K.Sharma helped us a lot in this struggle. Due to unknown reason our same council derails our progressive dream projecr. It is creating a great loss to our surgical branches .Therefore I once again appeal to all the specialists of surgical branches to raise their voice to restore Sangyaharan speciality.

Keeping in view 'Ayurved as Total Health System' I appeal to authorities of AYUSH to take neccessory steps to restore this specility immediately in favor of Ayurved and entire world.

Jai Hind Jai Ayurved Jai Sangyaharan

Devendra Nath Pande

Chief Editor,
Professor & Head, Deptt. of Sangyaharan,
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Current Excoriation of Leech Therapy

***Dr. Sarita Meena *Dr.R.K.Jaiswal ***Dr. D.N.Pande**

Abstract: Leeches are Parasurgical procedure used in medical practice sinse ancient times to treat different types of diseases which is caused by three Dosha. Leeches removes vitiated Dosh and toxins which accumulate in the body and its biochemical substances that have therapeutic use. Leech therapy is a Blood letting procedure in which Leech remove impure blood.

Key Word: Leech Therapy, Jalauka, Raktamokshan, Hirundo Therapy.

Introduction: Ayurveda is the oldest healing science. In Sanskrit word , Ayurveda means science of life. Different type of treatment is given in Ayurveda as like Medicinal , Surgical and Parasurgical . Jalaukavcharan is one of Parasurgical process . Leech therapy may be called Hirundo Therapy.In ayurvedic texts it is mentioned as Jalaukavacharan. Leeches are sheet in nature, so commonly used in Pittaj and Raktaj disorders (S .S . - 13 / 6)

Description of Jalauka in Ancient history is that Lord Dhanwantary evolved in this world after Samudra Manthan with Jalauka (Leech) along with pitcher filled nectar in his hand. Bloodletting can be done along with Shringa, Alabu, Jalauka and Siravedh, out of them, Jalaukavacharan (Leech Therapy) is the mildest and safest methods used for blood-letting . Leeches are blood sucking invertebrate of family Annelida. In Sanskrit, its name is Jalauka because of their water-loving nature. Also they lives and takes their nutrition only from Jala (Water) [3] A leech contains various bioactive substances, which have potent anti-inflammatory, analgesic, anaesthetic properties etc.

Leech is organism of aquatic and moist muddy area..Some species of leech live in river ,pond ,fresh water ,sea etc.They are blood sucking organism which secret anticoagulant through saliva and breakblood clotting .So bleeding is common complication after application of leech.

Lecches are used for treatment of defferent disease like varicose vein ,pain management ,wound ,skin disease etc.

Etymologies:

The term Jalauka originate from two words : Jala + Oka;(water dwelling animals)
Jala (Water) + Oka (living place) = Jalauka
Another synonym of Jalauka is Jalyau.
Jala (Water) + Ayu (Life) = Jalayu i.e. animals having water as the life. ."(Su. Su. 13/9)

Avacharana:

Avacharana means ―Application
So; Jalaukavacharan means the application of Leeches.

***Ph.D.Scholor** Asst.Professor *** Professor & Head, Deptt. of Sangyaharan, I.M.S..B.H.U.,Varanasi-221005.**

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Classification:

Classification of Jalauka is Savisha & Nirvisha, i.e. poisonous and non-poisonous. Each group devided 6 sub types of Jalauka.(Su. Su. 13/8; A. H. Su. 26/36)

Savisha Jalauka (Poisonous)	Nirvisha Jalauka (Non poisonous)
Krishna	Kapila
Karbura	Pingala
Algarda	Sankumukhi
Indrayudha	Mushika
Samudrika	Pundarikamukhi
Gochandana	Savarika

Bioactive constituents of leech saliva

Hirudin: Inhibits blood coagulation by binding to thrombin

Calin: Inhibits blood coagulation by blocking the binding of Von Willebrand factor to collagen. Inhibits collagen- mediated platelet aggregation.

Destabilase: Monomerizing activity. Dissolves Fibrin. Thrombolytic effects.

Hirustasin: Inhibits Kallikrein, Trypsin, Chymotrypsin, Neutrophil Cathepsin G.

Bdellins: Anti-Inflammatory. Inhibits Trypsin, Plasmin, Acrosin.

Hyaluronidase: Increases Interstitial Viscosity. Antibiotic

Tryptase Inhibitor: Inhibits Proteolytic Enzymes of Host Mast Cells.

Eglins: Anti-Inflammatory. Inhibit the Activity of Alpha Chymotrypsin, Chymase, Subtilisin, Elastase, Cathepsin G.

Factor Xa Inhibitor: Inhibits the Activity of Coagulation factor Xa by forming Equimolar Complexes.

Complement Inhibitors: possibly replace natural complement inhibitors if they are deficient.

Carboxypeptidase A Inhibitors: Increases the inflow of blood at the bite site.

Histamine-like Substances: Vasodilator. Increases the inflow of blood at the bite site.

Acetylcholine: Vasodilator.

Anaesthetics Substance: Anaesthetic

Length of Jalauka : The maximum length of Jalauka has been reported 18 Anguli, big Jalauka may be used only for blood letting in animals i.e. horse, elephant, etc. For human being 4, 5 and 6 Anguli Pramana Jalauka should be preferred (A. S. Su. 35/4).

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Collection And Preservations of Leech: In Sushruta Samhita, it is described in detail. Collection of leeches is very simple. Acharya Sushruta has told that the leeches can be caught with a piece of wet leather, in tanks, streams and where there are lotuses. There is another method to collect the leeches i.e. the fresh meat of dead animals, fish or milk must be applied on the thigh of an animal or the human being himself, may apply on his thigh and keep the thigh in the water for some time. Jalauka will attract and will catch the place. Then remove them from the skin of the person with the application of Saindhava (rock salt) and collect (Su. Su. 13/15-16; A. S. Su. 35/4).

Time of Collection: Acharya Dalhana has mentioned that the best time for collecting leeches is Sharad Ritu (Autumn).Preservation Of Leeches : After collecting the leeches, they should be kept in a wide and new earthen pot. The pure water of tank with lotus should be filled into the pot. Feed it with leaf of lotus plants (Kamala Nala), Shaivala, the meat of pig and other animals, which are living in watery and marshy areas, and powder of stem of small plants. The grass and leaves of plants must be kept inside water in the pot for the bed. Sringataka, Kaseruka, Shalaka, Shaivala, Mruhala, Vallura, Mrutsana, Pushkara Beeja Churna, sweet-cold-clean water etc.should be provided for diet to Jalauka (A. S. Su. 35/4). On every third day the water should be changed and feeding should be dropped inside the pot. After seven days the pot should be changed. Vagbhata mentioned that the pot should be changed every five days (A. S. Su.35/4). Poisonous leeches must be thrown out.

Indications: Raktamokshana by Jalauka especially to king, rich people, children, old aged, coward weak, females and delicate people (Su. Su. 13/3).

Jalaukavacharan used in different type diseases like- Vidradhi (Abscess), Gulma (Abdominal swelling), Arsha (Piles), Kushtha (Skin disease), Vatarakta (Gout), Krostruka shirsha (Infective arthritis), Sandhi gata roga (Arthritis), Kantharoga (Goiter), Netraroga (Eye diseases), Granthi (Nodular swelling), Arbuda (Cancer), Shlipada (Filaria), Vidarika (Crackle), Vishadamshtra (Insect bite), Visharpa (Erysipelas), Siroroga (Diseases of scalp), Dantaveshta (Pyorrhea) and Plastic and reconstructive surgery .
Contraindications: Sarvanga shotha (Generalized oedema) Udarroga (abdominal diseases), Shosa (Tuberculosis),Ksheena (Emaciation),Garbhini (Pregnancy),Pandu (Anemia)

Material: Jalauka (Leech), Haldi, Pond for Jalauka cultivation, Sterile needle, wet Cotton, Ghrit, Madhu

Investigations :

Hb- gm/dl. TLC- /mm^3 HIV-
DLC- P L E M B CT- BT-
ESR-. FBS- mg/dl. BU- mg/dl.
RA Factor- Sr.Uric acid- mg/dl

Mode Of Action : In saliva of Leeches have many enzymes which enter in Blood through Leech such places .Hirudin is an anticoagulant which is vasodilator and increase blood supply to necrosed tissue and heeling that .

Poorve Karma : Method Proper Snehana (oleation) and Swedana (sudation) of the patient
Purification of Leech by pouring the Leech in water mixed with turmeric powder.
Part preparation – Cleaning of part of the body to which Leech is going to be applied.

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Pradhan karm: Before application prick the skin with sharp and sterile needle so that drop of blood comes out then applied the Leech through its front end and covers the Leech by wet cotton. If the Leech is not ready to suck the blood from the body part then application of Madhu, Ghrita, or butter should be done.

Observation of Leech:

- Gradual distention in the central portion of the body.
- Itching and burning sensation at the site of bite.
- Pulsations on the body of Leech may be visible.

Removal of Leech:

After 30-40 minutes the Leech is removed by itself, or by application of turmeric powder on the mouth of Leech/ body part. Then application of Madhu, Ghrita, or butter should be done

Care of wound – After detachment of Leech there is triangular wound created by mouth of Leech. The blood comes out from the wound. The bleeding from wound is checked by application of tight bandaiging with the use of Yastimadhu or Turmeric powder.

Induction of emesis : The Leech that is applied to the lesion under goes process of vaman so that the same leech can be applied next time to the same patient. For the vaman of Leech turmeric powder is applied over mouth of leech. The Leech vomits out all the blood sucked by it to get purified. Sometimes pressing of Leech from caudal to front end is required for proper emesis. After proper vamana Leech should be put in fresh water, where it swims swiftly and than settles down. Replace the Leech in a clean jar or Aquarium.

Conclusion: Application of leeches removes impure blood from body and biological active substance of saliva helps in defferent type of disease of blood. Due to anticoagulant property Jalaukavcharan improve local blood flow and also relieve pain.Leech Therapy is simple and economic process wich can be apply to poor persons also.

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Evaluation of Agnikarma with Special Reference To Marma Chikitsa

***Dr.Satyendra Kushwaha * Dr.R.K. Jaisawal * Dr.D.N.Pande**

ABSTRACT: Ayurveda, the science of life, is time tested science which does not require experimental evidences. It's all principles are universally applicable to each individual to have a long healthy life. It is such a treaty which is enriched in medicaments and different management for number of diseases. At present the human society is leading with mechanical life, frequent changing of lifestyle, environmental factors, climate, etc. The busy schedule, restlessness, anxiety, stress & strain, running after comfortable life, comparing to higher group curses different psychosomatic disorders. The major somatic disorders involves, the constant work schedule in improper sitting posture, continuous & over exertion, prolonged travelling by different vehicles, less sports activities, exercises, etc. which in fact cause undue pressure on spinal cord, knee joints, shoulder joints, wrist joint, etc. and produce pain. Alternative therapies refer to a broad group of natural and spiritual healing methods are different than the conventional western medicine (or pharmaceutical medicine). Many of these healing methods have been used for centuries in many different cultures. Ayurveda, Acupuncture, Aromatherapy, Herbal therapy, Meditation, Naturopathy, Traditional Chinese Medicine (TCM), etc. are some examples. Agnikarm and Marma science is one of the special aspects deeply elaborated by Ayurveda. Marma are several vital points on the body having importance regarding traumatic effect.These points when exposed to trauma, generate the symptoms from pain to fatal effect. These points should be protected from injury. On the other hand these marma are considered as healing points. Marma chikitsa provide tridosha-trigunasamnya(equilibrium) as these points are seat of prana.
Keywords: Marma chikitsa, Marma,Vital Points, Pain, Agnikarma.

INTRODUCTION-

Sushruta has mentioned different methods of management of diseases, such as Bheshaja karma, Kshara Karma, Agni Karma, Shastrakarma and Raktamokshana. The approach of Agni Karma has been mentioned in the context of diseases like Arsha, Arbuda, Bhagandar, Sira, Snayu, Asthi, Sandhigata Vata Vikaras and Gridhrasi. Gridhrasi is seen as a panic condition in the society as it is one of the burning problems, especially in the life of daily labourers. It is characterized by distinct pain starting from Sphik Pradesha (gluteal region) and goes down toward the Parshni Pratyanguli (foot region) of the affected side of leg. On the basis of symptomatology, Gridhrasi may be simulated with the disease sciatica in modern science. In modern medicine, the disease sciatica is managed only with potent analgesics or some sort of surgical interventions which have their own limitations and adverse effects, whereas in Ayurveda, various treatment modalities like Siravedha, Agni karma, Basti Chikitsa and palliative medicines are used successfully. Among these, Agni Karma procedure seems to be more effective by providing timely relief. Shalakas for Agni Karma made up of different Dhatus like gold, silver, copper, iron, etc. for different stages of the disease condition have been proposed.

Marma science of Ayurveda has covered a long spells, from Vedic era to till date. The concept of

***M.D.(Ay) 3rd year ** Asst. Professor *** Professor & Head, Deptt. of Sangyaharan, I.M.S..B.H.U.,Varanasi-221005.**

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Marma is one such imperative and unique principle of Ayurveda. In ancient literature, science of Marma was limited to the war science and Marma points were mainly considered as only fatal points i.e. trauma to them leads to debility or even death as these are seat of Prana (life energy) but in present era its applied aspect, that is, stimulation of these Marma by means of Abhyanga (massage), Mardana (Acupressure), Aroma therapy, Pranic healing, Herbs (lepa), Raktamokshan (blood letting) and Agni karma (heat application),etc is utilised to treat disease but Marma chikitsa, a therapy practised by few practitioners to stimulate these Marma points directly by applying pressure, vibrating tendons, pinching or application of hot and cold pastes, oils and ointment on Marma depending on the type of Marma had emerged as new dimension in non pharmacological treatment of Ayurveda. The concept of Marma has its root in Vedas and from vedic era to till date, it is still surviving due to its importance for human life. Ayurveda consider that there are 107 Marma points/ regions in the body that must be protected. Marma science was basically considered as war science in which the knowledge of Marmas was very crucial because the protection of these parts of body is mandatory for survival. These body regions are the considered as seat of Prana (life energy).

AIMS- To compare the effectiveness of Agni Karma and Marma Therapy.

OBJECTIVES:

To explore the literature regarding Agni Karma and Marma Therapy in Ayurvedic and modern text.
To evaluate the effectiveness of Agni Karm and Marma Therapy for management of Pain-Vedana
To compare the efficacy of Agni Karma with Marma Therapy to explore a suitable conservative treatment for joint pain management.
To reduce the severity and duration of painful condition.
To provide cheap, safe and effective treatment in joint pain management.
To study associated benefits as well as side effects of Agni karma and Marma Therapy which are not mentioned in ancient classics?
To standardize an Ayurvedic line of treatment which may prove effective in the management of the joint pain?

PLAN OF STUDY :

Study was planned under two headings
Conceptual study
Clinical study

1.Conceptual study-

In this part a detailed study of the literature related to Agni Karma, Marma Therapy, Vedana, Pain, Agni Karma procedure and drug has been carried out to have clear idea about the mechanism of the pain pathway and available procedure of management.

2.Clinical study -

Clinical study was carried out by dividing patients in two groups:

Group A - 30Patients with Agni Karma Therapy
Group B - 30Patients with Marma (Chikitsa) Therapy.

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EXAMINATION AND ASSESSMENT:

After the registration of the patient, the detailed history was taken and complete physical examination was performed. All findings were noted down in a set proforma, if he/she fulfilled the conditions of inclusion criteria.

Particulars of the patient including age, sex, occupation, socio-economic status, religion, dietic habits etc.

Chief complaints with duration of symptoms, their commencement, history of present illness including history of trauma, straining and nature of pain.

History of past illness, particularly regarding trauma/straining of affected part.

CLINICAL STUDY-

1.Selection of patients

All the patients attending Sangyaharan Vedanahar Clinic suffering from Sandhivata, Gridhrasi, Kativata and different type of Sandhishool were selected for this study.

2.Inclusion criteria

Patients having typical clinical features pertaining to above condition.

Patients willing to undergo trial.

Patients between age group 20-70 years, of either sex.

3.Exclusion criteria

Patients below 20 years and above 70 years of age.

Patients not willing to undergo trial.

Patient suffering from diabetes mellitus, tubercular arthritis, etc.

Patients of Paittik Prakriti, Alpa Satva, Avar Sahanam, Pregnant woman.

4.LABORATORY INVESTIGATIONS

Blood investigation - Hb, TLC, DLC, ESR.

FBS, BU, S. Creatinine, S. Uric acid, R.A. Factor.

X-ray of the affected part of the body.

5.GROUPING OF PATIENT

Patients suffering from Sandhigata Vata, Gridhrasi, Kati Vat etc. were selected from Sangyaharan Vedanahar O.P.D. Selected patients were randomly divided in two groups as below –

Table :The number of patients and nature of treatment in the selected two groups-

Groups	No. of Patients	Treatment
GroupA	30	Agni karma Chikitsa Exercise – Simple exercise of affected joint for a few minutes at a time but several times a day.
GroupB	30	MarmaChikitsa-Therapy

Technique of marma therapy –

1. Identification – Identification of each marma is very important for optimum result and should be done under expert guidance only.

2. Stimulation – 3 to 4 times a day, each marma for 20 to 25 times in one setting.

3. Rhythm – As our respiration, approx 18 times per mint.

4. Position – It can be done both in sitting and supine position, however for optimum results various Asanas and postures have been described in various texts.

5. Treatment duration – Duration of therapy depends on various factors viz. Severity, duration of disease, cause of the pain.

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OBSERVATION AND REASULT-

Effect On Visual Analogue Scale (Vas) –

Table :The statistical comparison of difference in mean of visual analogue scale between the Agni Karma and Marma groups at corresponding time i.e. before treatment and after treatment by applying student t-test, p-values and remarks are as follows:

Group		VAS Before Treatment Mean ±SD	VAS After treatment Mean ±SD
Group A		5.7 ± 0.94	2.35 ± 1.17
Group B		5.61 ± 1.41	3.66 ± 1.18
Comparison between groups unpaired 't' test	t value	t = -1.19	t = -0.41
	p-value	p > 0.05	P > 0.05
Remark		NS	NS

Table shows that mean of visual analogue scale in-group A (Agni Karma) before and after treatment was 5.7 ± 0.94 and 2.35 ± 1.17 respectively, while in group B (Marma) it was 5.61 ± 1.41 and 3.66 ± 1.18 respectively.

The above statistical comparison represents that difference in mean of visual analogue scale between group A and group B at corresponding timings are statistically insignificant.

The statistical comparison of visual analogue scale before treatment and after treatment within the group by applying paired t-test, p-values and remarks are as follows-

Group		Group A	Group B
VAS Before Treatment Mean ±SD		5.7 ± 0.94	5.61 ± 1.41
VAS After treatment Mean ±SD		2.35 ± 1.17	3.66 ± 1.18
Comparison within the group	t value	t = 18.21	t = 7.77
	p-value	p < 0.01	P < 0.05
Remark		HS	S

From Table it is observed that changes in visual analogue scale is significant in both groups observed at before treatment vs. after treatment.

Effect On Karnofsky Scale (Ksky)-

Table :The statistical comparison of difference in mean of Karnofsky pain scale between the Agni Karma and Marma at corresponding time i.e. before treatment and after treatment by applying student t-test, p-values and remarks are as follows:

Group		KSKY Before Treatment Mean ±SD	KSKY After Treatment Mean ±SD
Group A		67.00±7.32	98.50 ±3.66
Group B		63.00±5.71	89.00±7.88
Comparison between groups unpaired 't' test	t value	t = -1.925	t = 4.889
	p-value	p > 0.05	P < 0.001
Remark		NS	HS

Table shows that mean of Karnofsky pain scale in-group A (Agni Karma) before and after treatment was 67.00±7.32 and 98.50 ±3.660 respectively, while in group B (Marma) it was 63.00±5.71± 0.70 and 89.00±7.88 respectively.

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The above statistical comparison represents that difference in mean of Karnofsky pain scale between group A and group B at corresponding timings are statistically highly significant.

Table : The statistical comparison of Karnofsky pain scale before treatment and after treatment within the group by applying paired t-test, p-values and remarks are as follows-

Group		Group A	Group B
KSKY Before Treatment Mean ±SD		67.00±7.32	63.00±5.71
KSKY After treatment Mean ±SD		98.50 ±3.66	89.00±7.88
Comparison within the group	t value	t = 23.132	t = 10.341
	p-value	p < 0.001	P < 0.001
Remark		HS	HS

From Table it is observed that changes in Karnofsky pain scale is highly significant in both groups observed at before treatment vs. after treatment.

Effect On Pricking Sensation (Pricking Scale)-

Table : The statistical comparison of difference in mean of Pricking scale between the Agni Karma and Marma groups at corresponding time i.e. before treatment and after treatment by applying student t-test, p-values and remarks are as follows:

Group		Before Treatment Mean ±SD	After treatment Mean ±SD
Group A		1.33 ± 0.59	0.33 ± 0.48
Group B		1.05 ± 0.97	0.105 ± 0.32
Comparison between groups unpaired 't' test	t value	t = 1.65	t = -1.39
	p-value	p > 0.05	P > 0.05
Remark		NS	NS

Table shows that mean of Pricking scale in-group A (Agni Karma) before and after treatment was 1.33 ± 0.59 and 0.33 ± 0.48 respectively, while in group B (Marma) it was 1.05 ± 0.97 and .105 ± 0.32 respectively.

The above statistical comparison represents that difference in mean of pricking scale between group A and group B at corresponding timings are statistically insignificant.

Table : The statistical comparison of pricking scale before treatment and after treatment within the group by applying paired t-test, p-values and remarks are as follows-

Group		Group A	Group B
Before Treatment Mean ±SD		1.33 ± 0.59	1.05 ± 0.97
After treatment Mean ±SD		0.33 ± 0.48	0.105 ± 0.32
Comparison within the group	t value	t = 7.67	t = 7.11
	p-value	p < 0.05	P < 0.05
Remark		S	S

From Table it is observed that changes in Pricking scale is significant in both groups observed at before treatment vs. after treatment.

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Effect On Pain Radiation-

Table : The statistical comparison of difference in mean of radiation of pain scale between the Agni Karma and Marma groups at corresponding time i.e. before treatment and after treatment by applying student t-test, p-values and remarks are as follows:

Group		Before Treatment Mean ±SD	After treatment Mean ±SD
Group A		1.89 ± 1.93	0.05 ± 0.22
Group B		1.66 ± 1.23	0.11 ± 0.32
Comparison between groups unpaired 't' test	t value	t = -1.44	t = -0.81
	p-value	p > 0.05	P > 0.05
Remark		NS	NS

Table shows that mean of radiation of pain scale in-group A (Agni Karma) before and after treatment was 1.89 ±1.93 and 0.05 ± 0.22 respectively, while in group B (Marma) it was 1.66 ± 1.23 and 0.11 ± 0.32 respectively.

The above statistical comparison represents that difference in mean of radiation of pain scale between group A and group B at corresponding timings are statistically insignificant.

Table :The statistical comparison of radiation of pain scale before treatment and after treatment within the groups by applying paired t-test, p-values and remarks are as follows-

Group		Group A	Group B
Before Treatment Mean ±SD		1.89 ± 1.93	1.66 ± 1.23
After treatment Mean ±SD		0.05 ± 0.22	0.11 ± 0.32
Comparison within the group	t value	t = 5.43	t = 3.91
	p-value	p < 0.05	P < 0.05
Remark		S	S

From Table it is observed that changes in radiation of pain scale is significant in both groups observed at before treatment vs. after treatment.

Effect On Tenderness –

Table : The statistical comparison of difference in mean of tenderness scale between the Agni Karma and Marma groups at corresponding time i.e. before treatment and after treatment by applying student t-test, p-values and remarks are as follows:

Group		Before Treatment Mean ±SD	After treatment Mean ±SD
Group A		1.27 ± 0.46	0.38 ± 0.50
Group B		1.05 ± 0.59	0.15 ± 0.38
Comparison between groups unpaired 't' test	t value	t = -0.67	t = 1.01
	p-value	p > 0.05	p > 0.05
Remark		NS	NS

Table shows that mean of tenderness scale in-group A (Agni Karma) before and after treatment was 1.27 ± 0.46 and 0.38 ± 0.50 respectively, while in group B (Marma) it was 1.05 ± 0.59 and 0.15 ± 0.38 respectively.

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The above statistical comparison represents that difference in mean of tenderness scale between group A and group B at corresponding timings are statistically insignificant.

Table : he statistical comparison of tenderness scale before treatment and after treatment within the groups by applying paired t-test, p-values and remarks are as follows-

Group		Group A	Group B
Before Treatment Mean ±SD		1.27 ± 0.46	1.05 ± 0.59
After treatment Mean ±SD		0.38 ± 0.50	0.15 ± 0.38
Comparison within the group	t value	t = 4.45	t = 6.14
	p-value	p < 0.05	P < 0.05
Remark		S	S

From aboveTable it is observed that changes in tenderness scale is significant in both groups observed at before treatment vs. after treatment.

SUMMARY -

The patients of group A, was treated with Shalaka Agni Karma in three sitting in one week interval. The patients of group B, was treated with Marma Chikitsa in three sitting in one week interval.

Both the groups were followed after twenty one days for observation and result of treatment.

The clinical assessment of the present study was made under following parameters:

Pain- Visual Analogue Scale, Pricking sensation. Radiation of pain, Tenderness, Ability to do daily routine work- Karnofsky Scale and Change in the range of movement- Stiffness.

Statistical comparison of Visual Analogue Scale before treatment and after treatment within the group was significant in both the group. It means that significant pain relief is achieved by trial procedure used for present study.

];'Statistical comparison of mean of Karnofsky scale before treatment and after treatment within the group was also significant in both the group. It means that significant pain relief is achieved in both the groups which enhancing the daily work performance of the patient. Statistical comparison of mean of Pricking sensation scale, pain Radiation scale, Tenderness scale before treatment and after treatment within the group was significant in both the group. It reflects that Agni Karma gives very beneficial effect in other modalities of pain like pricking, radiating and tenderness also.

The desirable and undesirable effects like sedation, excitement, dizziness, nausea, and vomiting were not present significantly in both groups. Whereas in some patients of the both groups apprehension was observed, which are insignificant and identical, this also proves that trial parasurgical procedure did not produce any undesirable effect.

CONCLUSION-

This can be concluded on the basis of the above observations made on patients treated by Agni Karma chikitsa with Shalaka and Marma chikitsa -

The trial procedure Agni Karma with Shalaka and Marma chikitsa has Vedanahar (analgesic) and Shothahar (anti-inflammatory) properties.

Agni Karma with Shalaka and Marma chikitsa is a simple modality of treatment with minimum complication, which can be done easily.
Agni Karma Chikitsa with Shalaka and Marma chikitsa does not produce any significant side effects.
Agni Karma Chikitsa with Shalaka and Marma chikitsa does not alter normal physiology. No significant changes were observed in mean blood pressure, pulse rate, respiratory rate and oxygen saturation during the whole course of the clinical study.
The Agni Karma Chikitsa with Shalaka and Marma chikitsa is almost equally effective as Vedanahar analgesic.
Number of sittings of Agni Karma depends upon the chronicity and severity of disease.
The efficacy of treatment of Agni Karma with Shalaka and Marma chikitsa is identical.

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Evaluation of Haridra (Curcuma longa) as an adjuvant in Metronomic Chemotherapy Treatment Regime in Cancer Patients

*** Srivastava Pourush ** Shahi U.P. *** Pandey K.K**

Abstract: Normally, human cells grow and divide to form new cells as the need of the body for repair and development . When cells grow old or become damaged, they die, and new cells take their place. However,the development of cancer takes place when this orderly process breaks down and there is no control on cell division. According to the National Cancer Registry Programme of the India Council of Medical Research (ICMR), more than 1300 Indians die every day due to cancer. Between 2012 and 2014, the mortality rate due to cancer increased by approximately 6%. In 2012, there were 478,180 deaths out of 29,34,314 cases reported. In 2013 there were 4,65,169 deaths out of 30,16,628 cases. In 2014, 4,91,598 people died out of 28,20,179 cases .[1] The statistical data show that it is difficult to treat cancer because problems associated with early diagnosis of cancer ,targeting cancer stem cell is difficult, drug resistance properties of cancer stem cell make them immune to anticancer drug and metastasis pose a huge problem in cancer treatment. In Metronomic chemotherapy low doses of anticancer drugs are given on a continuous regular schedule usually over a long time.Ayurveda proposes guidelines and detailed methodology of healthy living and treatment of various medical conditions which are time tested and applicable to current healthcare issues. In terminally ill cancer patients poor prognosis, unfruitful results , lost hope of relatives and patient may dilute intent of treatment resulting in worsening the condition medically, mentally, morally and socially. However, it's ethical and moral responsibility of healthcare professional to make every possible efforts for betterment and convenience of the patient.

In the present research work an indigenous drug Haridra (Curcuma longa) was selected to evaluate its efficacy as an anti-inflammatory & analgesic, anti cancerous ,antioxidant ,hepatoprotective and renoprotective properties along with metronomic chemotherapy as a palliative care in advanced cancer patient. Haridra is a traditional remedy in Ayurvedic medicine ,used in India for variety of inflammatory diseases . The main constituents of haridra is curcumin and at least 235 compounds, primarily phenolic compounds and terpenoids have been identified, including diarylheptanoids (including commonly known as curcuminoids), diarylpentanoids, monoterpenes, sesquiterpenes, diterpenes, triterpenoids, alkaloid, and sterols etc.

Keywords: Arbuda, Curcumin ,Antiinflamatory Antioxidant ,Analgesic, Metronomic chemotherapy, Palliative care.

Introduction: Arbuda (Cancer) is one of the most incurable diseases of the 20th century and the percentage is increasing in the 21st century. Various scientific investigations are making the best efforts to fight against the disease, but still it is very difficult to conclude the various type of the cancer by investigations and it becomes difficult to diagnose the sub types to start the specific chemotherapy regime. In this

***J.R.III. **Professor and head, Department of Radiotherapy and Radiation medicine, Institute of Medical sciences, Banaras Hindu University, Varanasi. ***Professor, Department of Sangyaharan, Institute of Medical sciences, Banaras Hindu University, Varanasi**

1st century the world is running behind alternative medicines like Ayurveda to minimize the well known side effects due to chemotherapy and provide a better quality life to the patients.

Several research studies have been conducted on herbs having anti-cancerous properties by many research scholars of system of Ayurveda, Siddha and also in ethno-botanical grounds.Ayurveda, the traditional Indian system of medicine of herbal drugs has been successful from very early times to prevent or suppress various tumours through various treatment techniques. The present clinical research work done t evaluate the orole of Haridra (Curcuma longa)used along with metronomic chemotherapy as a palliative care in advanced cancer patients. The trial drug Haridra (Curcuma longa) was used as adjuvant to evaluate is efficacy as anticancerous properties and to minimise well known ill effects of chemotherapy. The trial drug Haridra was used in the form of Ghansatva (dried powder of water decoction of haridra) & compared with placebo drug (starch capsule) . In the present clinical study 30 patients of advanced stage of cancer who were on metronomic chemotherapy were selected . The patients were randomly divided in two groups , consist of 15 patients each. All the patients of group-A were given *Capsule of Haridraghansatva 500mg BID* orally with plain water.while the patients of group-B were given Placebo starch capsule, 1 capsule (500 mg) orally twice a day with plain water.

The response of the trial drug in the form of ghansatwa along with the metronomic chemotherapy was evaluated on- over all wellbeing of the patients with laboratory investigations of-CBC, RFT, LFT and VAS Score .

Material and Method :

Selection of the Patients: All the diagnosed cases of cancer were registered for the present study from the OPD of Department of Radiotherapy and Radiation Medicine, S. S. Hospital, Institute of Medical science, BHU, Varanasi. Total number of 30 patients were registered and randomly divided into two identical groups. Consisting of 15 patients in each group. Out of thirty only Twenty patients completed their follow ups. The response of the trial drug in the form of ghansatwa along with the metronomic chemotherapy was evaluated on- over all wellbeing of the patients with laboratory investigations of-CBC, RFT, LFT and VAS Score in patients of both the group during each follow up observations. The comparative statistical analysis of both the treatment regimen was at the end of clinical trial study.

Inclusion Criteria -

1. Age range>20 years and <70 years.
2. The patients suffering from symptoms of pain, nausea, vomiting, constipation, anorexia, anxiety, insomnia, depression, apprehension, giddiness, general weakness.
3. Metastatic cases were also included.
4. Patients who are treated with metronomic chemotherapy.

Exclusion Criteria-

1. Age range < 20 years and >70 years.
2. Patients suffering from any other cardio respiratory and renal disorders.

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Patients of Group-I were treated as Trial group whereas of Group-II were considered as Control group.

Collection of Drug : The trial drug Haridra was collected from market and its validity was verified and confirmed from the department of Dravyaguna, Faculty of Ayurveda,IMS, BHU, Varanasi. The capsules of Haridra ghansatva was prepared in Ayurvedic pharmacy of B.H.U with standard preparatory methods.

Dose of Haridra ghansatva: The approximate dose of ghansatwa of the trial drugs was calculated according to the crude dose mentioned in *Ayurvedic* texts ,which was 500 mg for an adult patient weighing between 40-60 kg as BID . The trial drug and placebo was given along with metronomic chemotherapy to the patients of group I and group II respectively in three follow-ups of 15 days each.

Grouping of Patients: The selected patients were randomly divided in to two group. Group A & group B.

Groups	**Treatment given**
GroupA(Trial)	*Capsule of Haridra ghansatva 500mg BID* orally with plain water.
GroupB(Control)	Placebo starch capsule, 1 capsule (500 mg) orally twice a day with plain water.

Observation and Results:

The mean age(yrs), height(cm) and weight(kg) are statistically comparable and identical($P > 0.05$) in the patients of the both the groups.

The comparison of mean blood pressure, respiratory rate between both the groups at every step of study was also observed statistically insignificant at all the follow ups.

The statistical comparison of difference of VAS between both the groups at corresponding time i.e. before treatment and during follow ups by applying chi-square test, p value and remarks are as follows

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Groups	**Grade**	**VAS- No. & (%) of cases**				**Comparison within the group Friedman test**
		BT	**F1**	**F2**	**F3**	
Group I	0	4 (40.0%)	4 (40.0%)	4 (40.0%)	5 (50.0%)	$\chi 2$=13.047 P=0.005
	1	1 (10.0%)	2 (20.0%)	4 (40.0%)	4 (40.0%)	
	2	3 (30.0%)	3 (30.0%)	2 (20.0%)	1 (10.0%)	
	3	2 (20.0%)	1 (10.0%)	0 (0.0%)	0 (0.0%)	
Group II	0	3 (30.0%)	2 (20.0%)	2 (20.0%)	3 (30.0%)	$\chi 2$=2.797 P=0.424
	1	2 (20.0%)	5 (50.0%)	7 (70.0%	6 (60.0%)	
	2	5 (50.0%)	3 (30.0%)	1 (10.0%)	1 (10.0%)	
	3	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	
Comparison between the group Chi square test		$\chi 2$=2 .976 p=0.3 95	$\chi 2$= 2.95 2 p=0. 399	$\chi 2$= 1.81 8 p=0. 403	$\chi 2$= 0.90 0 p=0. 638	
Remarks		NS	NS	NS	NS	

It is obvious from the above table that improvement in complaints of pain was observed in patients of Group I whereas Group II showed less change which was also statistically highly significant in Group I whereas insignificant in Group II.

However more improvement was seen in patients of group I than group II, further incidence of Pain was statistically insignificant when compared between the groups, during course of study.

The statistical comparison of difference of Hb between both the groups at corresponding time i.e. before treatment and during follow ups by applying chi-square test, p value and remarks are as follows:

Group	**Hb**				**Intra group comparison Paired t test**
	BT	**F1**	**F2**	**F3**	
Group I (n=10)	11.300 ±1.5391	11.520 ±1.5817	11.750 ±1.4631	11.920 ±1.4703	t=-7.494 p=0.000
Group II (n=10)	11.910 ±1.5293	11.230 ±1.2789	11.040 ±1.2085	10.550 ±1.0416	t=6.796 p=0.000
Intergroup Comparison Student t-test	t=-0.889 p=0.386	t=0.451 p=0.657	t=1.183 p=0.252	t=2.404 p=0.027	
Remarks	NS	NS	NS	S	

The differences in mean hemoglobin during followups in patient of Group Ishows a statistically significant improvement whereas the same observation was significantly decreased in Group II. However the comparison between the groups was insignificant statistically during first and second follow up statistically significant at third follow up.

The statistical comparison of difference of TLC between both the groups at corresponding time i.e. before treatment and during follow ups by applying chi-square test, p value and remarks are as follows

Group	**TLC**				**Intra group comparison Paired t test**
	BT	**F1**	**F2**	**F3**	
Group I	7948.00	7770.00	7690.00	7675.00	t=2.686
(n=10)	±2784.185	±2682.474	±2451.847	±2583.199	p=0.025
Group II (n=10)	8348.50 ±1227.518	6761.20 ±1397.489	5945.90 ±1491.668	4962.60 ±950.863	t=12.200 p=0.000
Intergroup Comparison Student t-test	t=-0.416 p=0.682	t=1.055 p=0.306	t=1.922 p=0.071	t=3.116 p=0.006	
Remarks	NS	NS	NS	HS	

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From the abovetable it is a clear that comparison of mean TLC between both the groups at every step of study wasobserved statistically insignificant except at third follow up. Table also shows that rise in and fall in mean TLC wasstatistically significant in patient of both the groups when compared within the group I and group II, respectively.

The statistical comparison of difference of Urea between both the groups at corresponding time i.e. before treatment and during follow ups by applying chi-square test, p value and remarks are as follows

Group	**Urea**				**Intra group comparison Paired t test**
	BT	**F1**	**F2**	**F3**	
Group I (n=10)	24.690 ±5.5752	26.030 ±5.6141	27.40 ±6.257	29.00 ±8.750	t=-2.707 p=0.024
Group II (n=10)	30.600 ±7.6222	34.190 ±5.9512	38.70 ±5.794	42.14 ±4.768	t=-4.705 p=0.001
Intergroup Comparison Student t-test	t=-1.979 p=0.063	t=-3.154 p=0.005	t=-4.190 p=0.001	t=-4.170 p=0.001	
Remarks	NS	HS	HS	HS	

From the above table it isclear that comparison of mean urea between both the groups at every step of study was also observed statistically highly significant at all the follow ups. Table also shows that mean urea wasstatistically significant in patient of both the groups when compared within the groups.

The statistical comparison of difference of Creatininebetween both the groups at corresponding time i.e. before treatment and during follow ups by applying chi-square test, p value and remarks are as follows

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Group	**Creatinine**				**Intra group comparison Paired t test**
	BT	**F1**	**F2**	**F3**	
Group I (n=10)	.981 ±0.2270	1.099 ±0.2238	1.117 ±0.2418	1.151 ±0.2198	t=-2.707 p=0.024
Group II (n=10)	1.042 ±0.1470	1.146 ±0.1338	1.244 ±0.2087	1.459 ±0.2416	t=-4.705 p=0.001
Intergroup Comparison Student t-test	t=-0.713 p=0.485	t=-0.570 p=0.576	t=-1.257 p=0.225	t=-2.982 p=0.008	
Remarks	NS	NS	NS	HS	

From the above table it is clear that comparison of mean creatinine between both the groups was observed statistically insignificant during 1st and 2nd follow ups while highly significant at third follow up. Table also shows that mean creatinine was statistically significant in patient of both the groups when compared within the groups.

The statistical comparison of difference of SGOT between both the groups at corresponding time i.e. before treatment and during follow ups by applying chi-square test, p value and remarks are as follows

Group	**SGOT**				**Intra group comparison Paired t test**
	BT	**F1**	**F2**	**F3**	
Group I (n=10)	40.70 ±8.486	38.40 ±6.851	36.40 ±7.427	34.50 ±6.346	t=5.618 p=0.000 (HS)
Group II (n=10)	51.40 ±1.838	54.80 ±1.814	56.40 ±1.647	54.50 ±1.841	t=-6.433 p=0.000 (HS)
Intergroup Comparison Student t-test	t=-3.897 p=0.001	t=-7.318 p=0.000	t=-8.314 p=0.000	t=-9.571 p=0.000	
Remarks	S	HS	HS	HS	

From the above table it isclear that comparison of mean SGOT between both the groupswasobserved statistically highly significant at all follow ups. Table also shows that

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mean SGOT wasstatistically highly significant in patients of both the groups when compared within the groups.

The statistical comparison of difference of SGPT between both the groups at corresponding time i.e. before treatment and during follow ups by applying chi-square test, p value and remarks are as follows

Group	**SGPT**				**Intra group comparison Paired t test**
	BT	**F1**	**F2**	**F3**	
Group I (n=10)	41.30 ±9.2676	40.75 ±8.17	40.70 ±8.35	37.59 ±8.96	t=4.227 p=0.002
Group II (n=10)	44.900 ±2.1833	47.300 ±3.0569	48.00 ±3.771	50.600 ±3.1693	t=-5.828 p=0.024
Intergroup Comparison Student t-test	t=-1.169 p=0.258	t=-2.373 p=0.029	t=-2.519 p=0.021	t=-4.328 p=0.000	
Remarks	NS	S	S	HS	

From the above table it isclear that comparison of mean SGPT between both the groups at every step of study was observed statistically significant at all first and second follow up and highly significant at third follow up. Table also shows that mean SGPT was statistically significant in patient of Group II whereas highly significant in Group I when compared within the group

The statistical comparison of difference of Alkaline Phosphatase between both the groups at corresponding time i.e. before treatment and during follow ups by applying chi- square test, p value and remarks are as follows

Group	**Alkaline phosphatase**				**Intra group comparison Paired t test**
	BT	**F1**	**F2**	**F3**	
Group I (n=10)	306.60 ±30.229	303.60 ±27.273	300.00 ±43.287	285.20 ±29.743	t=7.441 p=0.000
Group II (n=10)	348.80 ±61.656	362.90 ±59.081	376.10 ±53.326	400.70 ±49.902	t=-6.435 p=0.000
Intergroup	t=-1.943	t=-2.882	t=-3.504	t=-6.287	

Comparison Student t-test	p=0.068	p=0.010	p=0.003	p=0.000	
Remarks	NS	S	HS	HS	

From the above table it isclear that comparison of mean alkaline phosphate between both the groups at every step of study wasobserved statistically significant at all follow ups. Table also shows that mean alkaline phosphate wasstatistically significant in patient of Group I and 2 both , when compared within the groups.

Summary :

Mean age, height and weight are statistically comparable and identical (P > 0.05) in the patients of the both the groups .

The response of both the treatment regimes was recorded and it was observed there was no any significant alteration in mean pulse rate during course of study in patients of both the groups

While observing the response of both the treatment regimes on mean blood pressure, it was also observed that there was no any significant alteration of mean blood pressure in patients of both the groups.

Pain being exclusively subjective experience which varies from person to person. Observations suggest that through there was highly significant decrease in visual analog pain score in patients of both the groups but comparatively better response was observed in trial group patients which is because of *Shothahara* (Anti inflammatory), *Vednahara*(Analgesic) property of *Haridra.*

Over all well being and cheerfulness is one of the important parameter in cancer treatment regime.Decrease in Hemoglobin concentration, TLC & DLC is very common in cancer patients with or without conventional therapy. Observations suggest that comparatively better improvement in hemoglobin percentage and total leucocyte count with differential leucocyte count was observed in patients of trial group as compared to patients received only placebo. These observations not only support the results of previous workers but also proved immuno-enhancing and anti-cancerous properties of trial drug *Haridra*.

Observations made on response of treatment on blood urea and serum creatinine level it was found that there was a less increment in patients of group I and more rise in patients of group II. The changes of blood urea and serum creatinine in patients of both the groups was

within the normal range but comparatively better in patients of group I. These observations also suggest that trial drugs didn't produce any renal impairment rather improved the renal functions.

Observations made on SGOT , SGPT, and alkaline phosphatase it was noticed that there was gradual fall in patients of group I as compared to gradual rise in patients of group II during course of follow-ups. These observations suggest a well known immune-enhancer and hepato-protective properties of trial drugs.

Conclusion : The above observations of the present clinical trial reveal that the trial drug has a very effective response on improving over all the quality life of terminally ill cancer patients when used as adjuvant along with metronomic chemotherapy .Various interventional studies have also proved that Ayurvedic herb *Haridra* improves the quality of life during cancer chemotherapy/radiation treatment..Future a more detailed research work on trial drug Haridra will unturn many usefull and effective response in cancer treatment.The present study also supports the pharmacolocical properties of Haridra as mentioned in texts of Ayurveda many years before.

Hence it can be attributed that the trial drug Haridra can be included in clinical practice to improve the longevity along with the quality of life of cancer patients during conventional cancer therapy and even after the complication of treatment regeimn.A collaborative inter disciplinary research on herbal anti cancerous ,analgesics, anti inflammatory and immune enhancers in the field of cancer treatment is a global need as herbal drugs are economical ,less harmful ,safe and effective in many aspects of treatment of such a terrible disease.

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A Study On Pain Management In Postoperative Cases Of Inguinal Hernia

Dr. S. Bhat, Former Professor, S.D.M.C.A. Udupi, Professor,
Major S. D. Singh Ay. Medical College, Farrukhabad.

Abstract:

Back ground and Aims: Pain is the most common single problem for which people seek medical attention. This problem is further complicated and presents a challenging situation when a surgical intervention is needed to the patient. Surgery is invariably followed by pain as well as other signs and symptoms of inflammation in healing process. To tackle this situation, various postoperative therapeutic protocols have been studied in Ayurveda . One such study was planned with Triphala guggulu, Gandhak Rasayana, Asanadi Kwatha orally and Mahanarayan Taila Matra Basti per rectum in postoperative cases of inguinal hernia.

Material and Methods: Patients who have undergone elective surgery for inguinal hernia were selected randomly into this study group. Gandhaka Rasayana, Triphala Guggulu, and Asanadi Quatha were given orally as routine post-operative treatment. Patients were also given Mahanarayana Taila matrabasti per rectum. They were further evaluated for effective pain relief.
Results: Administration of Mahanarayana Taila matrabasti along with the above internal medication reduces the pain in post operative cases of inguinal hernia, observed over a period of one week.
Conclusion: Mahanarayana Taila matrabasti and oral administration of Gandhaka Rasayana, Triphala Guggulu and Asanadi Quatha provide adequate control of pain in post operative phase of inguinal hernia surgery.
Key words: Pain management, Triphala guggulu, Gandhak Rasayana, Asanadi Kwatha, Mahanarayana Taila, Matra Basti

Introduction:

Derangements of health requiring surgical interventions are invariably associated with apprehension prior to surgery and pain during immediate postoperative period. Perioperative care and monitoring of events are under the purview of sangyaharan(anesthesiology) and suitable therapeutic protocol to meet every variety of perioperative concerns should be constantly explored. Post operative pain is one such problem which deters many patients from opting surgical remedy at appropriate time. The agony of loved ones enduring a postoperative painful phase becomes firmly entrenched in the memory of patients' attendants. The cases of inguinal hernia are commonly seen in middle aged persons. While elective surgery is the right choice, patients tend to postpone it through a wide range of time interval, often due to fear of pain. Hence postoperative cases of inguinal hernia offer optimal model for the study of postoperative pain. Therefore a study was planned with oral administration of Triphala guggulu, Gandhak Rasayana and Asanadi Kwatha along with Mahanarayana Taila Matra Basti in postoperive cases of inguinal hernia.

Material and Methods :

This is randomized single blind study with Pre-test: Post-test design.

15 patients undergoing elective surgery for inguinal hernia were selected randomly from an Ayurvedic hospital for this study. Institutional Review Board approval was obtained.

The patients were administered Tab Triphala guggulu 450mg t.d.s., Tab Gandhak rasayana 250mg t.d.s., Asanadi Kwatha 40ml b.d. post operatively for seven days. Additionally Mahanarayana Taila matra basti in a dose of 30ml was given on previous night of surgery and then repeated once daily till removal of sutures. The patients were observed and assessed for severity of pain in the first and sixth post-operative days. The assessment was based on grading the pain from 0 to 3.

0 – No pain Normal
1 – Patients complains of pain only on movement Mild
2 – Pain during resting position Moderate
3 – More severe pain & require analgesic intervention Severe

Results

All patients who were selected for study were observed through the seven day period of study and the collected data were subjected to statistical evaluation. The details are being put forth here.

Table No 1 : Age Distribution :

Age (in yrs)	No. of patients	%
21-30	4	26.66
31-40	4	26.66
41-50	4	26.66
51-60	3	20.00

26.66% of patients were in each age groups of 21-30yrs, 31-40 years and 41-50 years; 20.00% patients in 51-60yrs.

Table No. 2 : Satva incidence:

Satva	No. of patients	%
Pravara	0	0.00
Madhyama	12	80.00
Avara	3	20.00

In majority of the patients i.e. 80.00% were of madhyama satva

Table No. 3 : Prakriti incidence:

Prakriti	No. of patients	%
Pitta-kaphaja	5	33.33
Vata-pittaja	9	60
Kapha-vataja	1	6.67

60% patients were of Vataja-pitta prakriti, 33.33% were of Pitta-kaphaja prakriti and rest 6.67% patients were of Kapha-Vataja prakriti.

Table No. 4: Assessment of pain on first and sixth postoperative days:

Days	Pain	Grade	No. of patients	%
1st postop day	No	0	0	0
	Mild	1	4	26.7
	Moderate	2	7	46.6
	Severe	3	4	26.7
6th postop day	No	0	13	86.67
	Mild	1	2	13.33
	Moderate	2	-	0
	Severe	3	-	0

Table No.5: Comparison of pain on first and sixth postoperative days :

Days	Mean	SD
1st postop day	2.00	0.76
6th postop day	0.13	0.35

Table No.6: Comparison of pain within the group (paired t test) on day1 Vs day6:

Mean of Difference	SD of Difference	t value	p value
1.87	0.74	9.727	= 0.000

Comparison on day1 versus day 6, the improvement in pain was found statistically significant.

Discussion: Post operative pain is unavoidable and it needs treatment. Feeling of comfort (no pain) and good wound healing is desired by every patient. The relief of pain has significant physiological benefits. Hence the goal of postoperative pain management is to eliminate or reduce pain and discomfort. Various agents (opioid vs. non opioid), routes(oral, intravenous, rectal), modes(patient controlled vs. as needed)[1] , nonpharmacological(physiotherapy, acupuncture etc.) and other systems of medicine (Ayurveda, Homeopathy etc.) for the treatment of postoperative pain exist. Acute pain is defined as the pain present after a surgical procedure[2]. The International Association for the Study of Pain (IASP) has recognized pain relief as human right[3]. Poorly managed pain can lead to prolonged rehabilitation[4]. Hence it is necessary to explore more effective method of pain relief.

In this randomized, prospective clinical study, the analgesic effect of oral administration of Triphala guggulu, Gandhak Rasayana and Asanadi Kwatha along with Mahanarayana Taila matrabasti on post-operative patients of inguinal hernia was assessed The Table No. 1 shows fairly equal distribution of incidence in age groups between 20 and 60 years. The majority of patients belong to Madhyama Satwa category as shown in Table No. 2. A higher incidence of inguinal hernia is noted in Vata-pittaja praktriti. Table No. 4, 5 and 6 show incidence and statistical comparison of pain within the group by paired t test showed significant pain relief.

Conclusion: Inguinal hernia is common surgical disorder and effective comprehensive Ayurvedic Postoperative management can be provided.

Mahanarayana Taila matrabasti and oral administration of Gandhaka Rasayana, Triphala Guggulu and Asanadi Kwatha provide adequate control of pain in post operative phase of inguinal hernia surgery.

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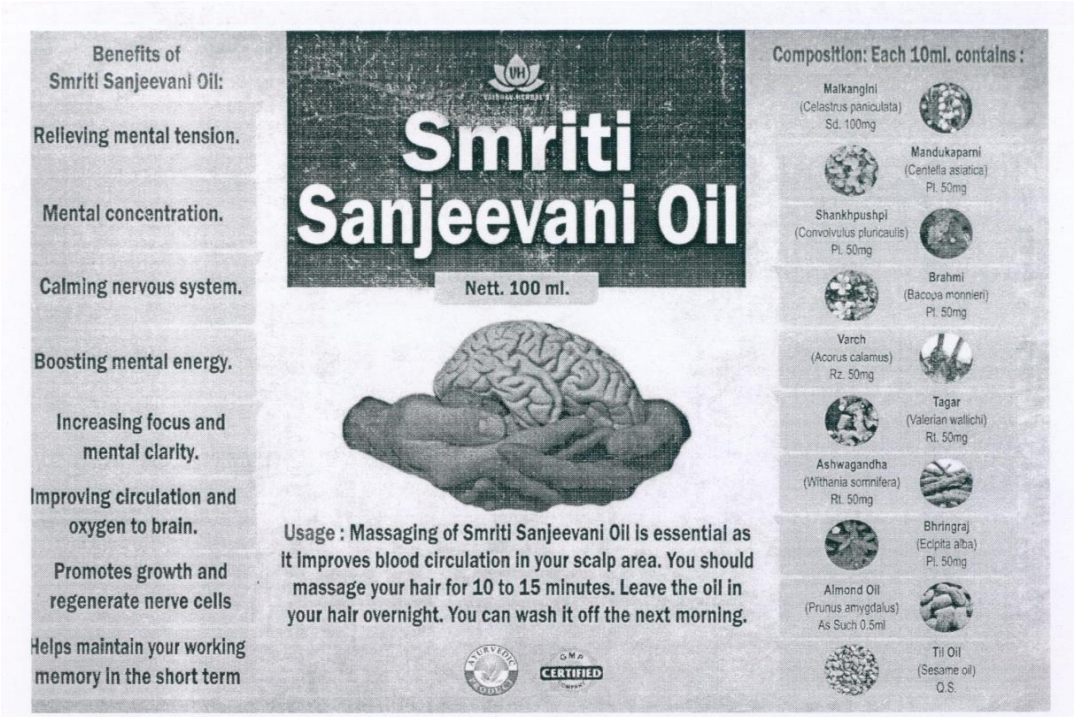
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Diabetic Neuropathy
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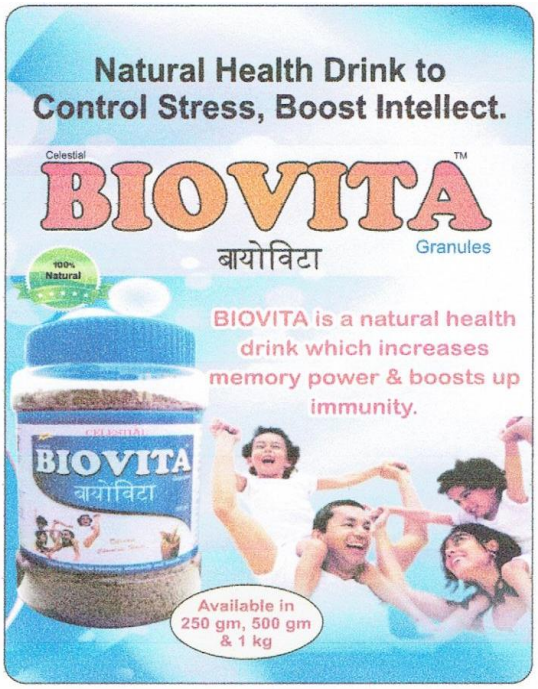

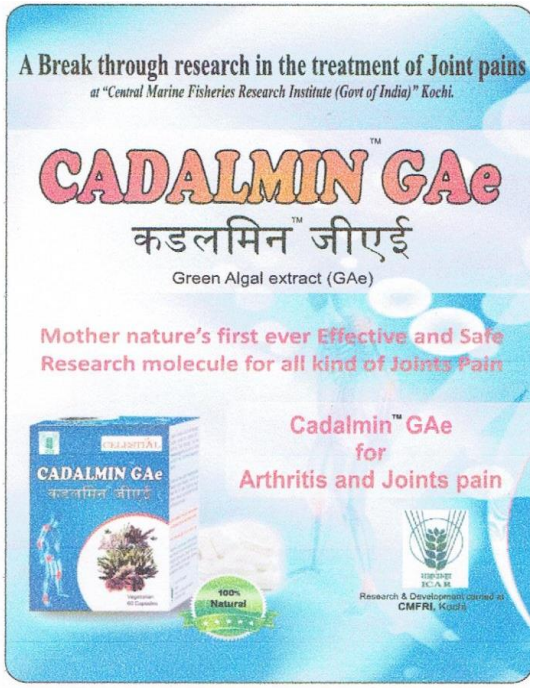

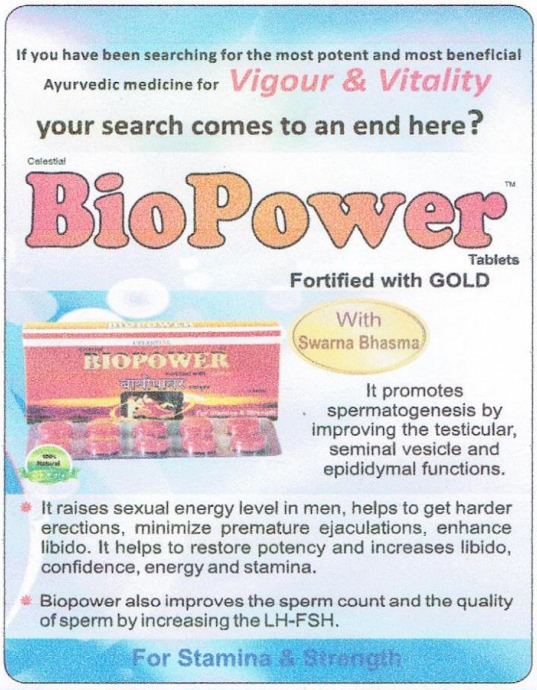

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