ISSN: 2322 - 0902 (P)
ISSN: 2322 - 0910 (O)

International Journal of Ayurveda and Pharma Research

Research Article

EVALUATION OF *SHIGRU* (*MORINGA OLEIFERA* LAM) SEED IN *SANGYAHARAN* IN POST OPERATIVE PAIN MANAGEMENT

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ABSTRACT

There are a number of analgesics for post operative pain management. But all the analgesics available have side effects and no analgesic can give complete analgesia in the post operative pain management. Therefore to search an indigenous drug for post operative pain management this research work was selected.

Aim: The main object of this work was to search an indigenous drug for post operative pain management.

Materials & Methods: For this study sixty patients of fistula in ano of either sex were selected of ASA grade I & II. Patients of group I were considered as control group & group II were considered as trial group. The patients of group I (control group) were given diclofenac sodium (50mg) at 10 PM of preoperative night and 1 hour before operation orally with an ounce of plain water and primary threading was done under spinal anasesthesia. The patients of group II (trial group) were given one capsule of *Shigru* seed *Ghansatva* (500 mg) at 10pm of preoperative night and 1 hour before operation orally with an ounce of plain water and primary threading was done under spinal anaesthesia.

The patients of group I were given diclofenac sodium 50mg orally and the patients of group II were given Shigru seed *Ghansatva* capsule (500 mg) orally when the patients felt pain in the post operative period.

Result: *Shigru* seed *Ghansatva* in post operative pain management showed its *Vedanasthapana* properties.

Conclusion: *Shigru* seed in the form of *Ghansatva* has *Vedanahar* (analgesic) and *Sothahar* (anti-inflammatory) properties like tablet diclofenac sodium used as premedicants.

KEYWORDS: *Bhagandar*, Fistula in ano, *Shigru*, Post operative pain management.

INTRODUCTION

The origin of pain has been considered with the origin of life. Ayurveda the science of life has given much emphasis to the pain and its consequences. And that is why at many places, measures to pacify pain and establishment of pleasure has been described. References of ancient literature spell the scientific knowledge of pain and its consequences to our ancient scholars. Pain (*Sula*) is one of the important symptoms of almost all diseases. Even in surgical operations without subsiding pain nobody can perform operation smoothly. Acharya Susruta mentioned the used of medicated wine or *Madya* before operation to relieve pain.[1]

Pain is an ordinarily complex sensation which is difficult to define and equally difficult to measure in an accurate, objective manner. It has been defined as the sensory appreciation of afferent nociceptive stimulation which elicits an automatic component, both are subjected to rational interpretation by the patient.

There are a number of analgesics for post operative pain management. But all the analgesics available have side effects and no analgesic can give complete analgesia in the post operative pain management. Therefore, to search an indigenous drug for post operative pain management this research work was carried out.[2]

In Ayurvedic literature there is description of three words used for denoting pain i.e., *Vedana, Shoola* & *Dukha*. Pain mainly depends upon the *Prakriti* of a patient. Pain is a pathological symptom predominantly caused by *Vata*. For example in *Vataj prakriti* individuals pain sensation is more prominently manifested. Pain is different from individual to individual, time to time & site to site.[3] *Shigru* has *Vedanahar* and *Sothahar* properties according to Ayurvedic classics. *Shigru* did not produce any significant side effects when used as premedicants.[4]

AIM: To evaluate *Shigru* seed in *Sangyaharan* in post operative pain management.

OBJECTIVE: The main object of this work is to search an indigenous drug for post operative pain management.

MATERIAL AND METHODS

Place of study: IPD of Govt. Ayurvedic College & Hospital, Guwahati.

Selection of patients: For this study sixty patients of Fistula in ano of either sex of age between 18-50 years and of ASA grade I & II was selected and was divided into two groups -I & II. Patients of group I was considered as control I group and group II was considered as trial group having 30 (thirty) patients in each group.

Inclusion criteria

1. Patients of age group between 18-50 years of either sex.

2. Those patients of ASA grade I & II.

Exclusion Criteria

1. Those who were outside the ASA grade I & II.
2. Those who were outside the age of 18-50 years.
3. Those who were pregnant.
4. Patients suffering from respiratory, cardiac, hepatic or renal diseases.
5. Patients allergic to Aspirin, Diclofenac sodium or other prostaglandin synthetase inhibitors.
6. Patients with the history of bleeding tendency or on anticoagulant therapy.
7. Patients with the history of peptic ulceration.

Parameters

Details of parameters used in the study.

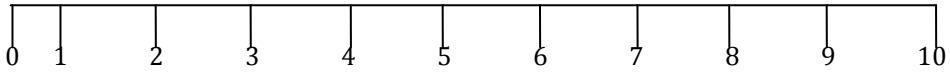
A. Desirable effects

(i) Analgesia
(ii) Sedation
(iii) Allaying of apprehension
(iv) Lack of excitement

B. Undesirable effects

(i) Dizziness
(ii) Emetic effect

Subjective Assessment: Assessment of pain by patients (0-10, Visual Analogue scale)



0 = No. Pain, 10 = Worst Possible pain.

Objective Assessment: By doctor on Duty (0-4)

0 = No discomfort; patient completely at ease.
1 = Patient drowsiness or asleep.
2 = Patient staying still, eyes closed and avoiding movement.
3 = Strained facial expression.
4 = Patient writhing, sweating and distressed.

Procedure

The study was done at IPD of Govt. Ayurvedic College & Hospital, Jalukbari. For this study sixty patients suffering from Fistula in ano of either sex was selected of ASA grade I & II and was divided into two groups.

The group I was considered as control group and group II was considered as trial group. The patients of group I (control group) were given diclofenac sodium (50mg) at 10 PM of preoperative night and 1 hour before operation orally with an ounce of plain water and primary threading was done under spinal anaesthesia. The patients of group II (trial group) were given one capsule of *Shigru* seed *Ghansatva* (500 mg) at 10 PM of preoperative night and 1 hour before operation orally with an ounce of plain water and primary threading was done under spinal anesthesia. The patients of group I were given diclofenac sodium 50mg orally and the patients of group II were given *Shigru* seed *Ghansatva* capsule (500 mg) orally when the patient felt pain in the post operative period. There were 30 (thirty) patients in each group.

Table 1: Statistical comparison of mean age, weight and height of the patients. Table 2: Statistical comparison of MBP (mm Hg) before pre medication (A), after premedication (B) intraoperative (C) and post operative (D)

Group		Age (years) Mean ± SD	Weight (kg) Mean ±SD	Height Mean ±SD
Group I (Control)		43.0667 ± 9.332	56.9000 ± 6.942	168.50 ± 10.5593
Group II (Trial)		44.300 ± 6.194	57.333 ± 5.64085	172.433 ± 4.6363
Comparison between groups unpaired 't' test	t-value	0.515	0.283	1.868
	p-value	>0.05	>0.05	>0.05
Remarks		NS	NS	Ns

Table 3: Statistical comparison of difference in the mean pulse rate/mm before premedication (A), after premedication (B), Intraoperative (C), and post operative period (D)

Comparison within the groups	Group I (Control)			Group II (Trial)			Remark
	t-value	p-value	Remark		t-value	p-value	
AI vs BI	6.129	<0.05	S	AII vs BII	8.421	<0.05	S
AI vs CI	7.414	<0.05	S	AII vs CII	5.8	>0.05	S
AI vs DI	2.709	>0.05	S	AII vs DII	0.066	>0.05	NS

Table 4: Statistical comparison of mean respiratory rate per minute before pre medication (A) after premedication (B) during intraoperative (C) and post operative period

Comparison within the groups	Group I (Control)			Group II (Trial)			Remark
	t-value	p-value	Remark		t-value	p-value	
AI vs BI	3.715	<0.05	S	AII vs BII	3.090	<0.05	S
AI vs CI	3.820	>0.05	S	AII vs CII	1.108	>0.05	NS
AI vs DI	1.238	>0.05	NS	AII vs DII	0.522	>0.05	NS

Table 5: Effect on temperature

Group	Mean respiratory rate/min (Mean ± SD)			
	Before pre medication (A)	After premedication (B)	Intra operative (C)	Post operative (D)
Group I (Control)	AI 17.226 ± 1.0148	BI 17.266 ± 1.466	CI 17.2000 ± 1.0305	DI 17.133 ± 1.0742

Group II(Trial)		AII 17.433 ± 1.655	BII 17.433 ± 1.651	CII 17.166 ± 1.0199	DII 17.433 ± 0.9352
Comparison between groups un paired t-test	t-value	0.591	0.557	0.126	1.154
	p-value	>0.05	>0.05	>0.05	>0.05
Remark		NS	NS	NS	NS

Table 6: Effect on oxygen saturation

Comparison between the groups	Group I (Control)			Group II (Trial)			Remarks
	t-value	p-value	Remarks		t-value	p-value	
AI vs BI	14.87	<0.05	S	AII vs BII	11.27	>0.05	S
AI vs CI	0.52	>0.05	NS	AII vs CII	0.44	>0.05	NS
AI vs DI	1.45	>0.05	NS	AII vs DII	0.19	>0.05	NS

Table 7: Desirable and undesirable effect

Symptom	Incidence	Group I (Control)		Group – II (Trial)		p-value	Remarks
		No.	%	No.	%	Fisher Exact	
Sedation	Present	11	39.3	9	28.1	P-0.390	NS
	Absent	19	60.7	21	71.9		
Apprehension	Present	6	21.3	3	9.4	P-0.281	NS
	Absent	24	68.7	27	90.6		
Excitement	Present	10	35.5	5	15.6	P-0.24	NS
	Absent	20	64.5	25	84.4		
Dizziness	Present	2	7.1	0	0	P-0.214	NS
	Absent	28	92.9	30	100		
Nausea	Present	3	10.3	1	3.1	P-0.331	NS
	Absent	27	80.7	30	96.9		
Vomiting	Present	1	3.6	1	3.1	P-0.467	
	Absent	29	96.4	29	96.9		

Table 8: Surgical time & duration of anaesthesia

Parameters	Group I (Control) (Mean ± SD)	Group II (Trial) (Mean ±SD)	t-value	p-value	Remarks
Total surgical time (min)	19.321 ± 6.6213	20.325 ± 5.298	0.615	>0.05	NS
Duration of Anaesthesia (min)	184.2851 ± 22.67	183.12 ± 17.67	0.222	>0.05	NS

Table 9: Post Anaesthetic sequel

Side effects	Incidence	Group I (Control)		Group – II (Trial)		p-value	Remarks
		No.	%	No.	%	Between fisher exact	
Sedation	Present	7	25	5	15.6	P-0.52	NS
	Absent	23	75	25	84.4		
Nausea	Present	5	8.1	1	3.1	P-0.288	NS
	Absent	25	91.9	29	96.9		
Vomiting	Present	2	7.1	0	0	P-0.24	NS
	Absent	28	92.9	30	100		
Dizzness	Present	4	14.3	0	0	P-0.242	NS
	Absent	26	85.7	30	100		
Dyspepsia	Present	0	0	0	0	0	NS
	Absent	30	100	30	100		

Table 10: Requirement time of 1st dose of analgesic

Groups	Mean ± SD	t-value	p-value	Remakes
Control group I	223.00 ± 42.30	1.596	>0.05	NS
Trial group II	239.00 ± 39.65			

DISCUSSION

The objective of this study was to search an indigenous drug for post operative pain management. In this study 60 patients were divided into two groups consisting of 30 patients in each group.

All the records of the observations were maintained properly. All the observations were observed thoroughly. The data is discussed as follows:

1. Age, weight and height: It was observed that in all the groups mean age, weight and height of the patients were statistically comparable.
2. Blood pressure: On the basis of the findings it can be attributed that trial drug *Shigru* exerted effect on CVS without producing serious ill effects.
3. Pulse rate: Observations effect of trial drug *Shigru* on pulse rate during the course of the study support the

view of our ancient scholars i.e. *Kapha pitta samak* properties.

4. Respiratory rate: Observations proved that there is no untoward effect of trial or control drugs on the respiratory system.
5. Body temperature (Axillary): It was observed that the trial drug *Shigru* controlled the rise of body temperature unlike tab dicolfenac sodium, possesses analgesic properties supporting the view of Ayurvedic reference (*Vedanahar*).
6. Oxygen saturation (SpO2): While observing the response of both the control drug and trial drug on arterial oxygen saturation during full course of study it was noted that both the drugs did not exert any significant untoward effects.
7. Desirable and undesirable effects: All desirable effects were found and undesirable effects were either absent or negligible with *Shigru*, the trial drug.
8. Total surgical and anaesthetic time: the total surgical and anesthetic duration was identical in both groups and statistically insignificant when compared between the groups.
9. Post anaesthetic Sequel: Minimal and in significant.
10. Requirement time of first dose of analgesic: The requirement of post operative analgesia is felt under regional anaesthesia when the effect of anaesthetic drug was washed out and patients starts feeling pain.

    The observation suggested that the first dose of analgesic in patient of group I and group II respectively was comparable and insignificant.

    This observation suggested the *Vedana sthapan* properties of *Shigru* mentioned in text of Ayurveda.

CONCLUSION

- On the basis of the observations made on patients operated (primary threading) under lumbar subarachnoid block, this can be concluded that
- The trial drug *Shigru* in the form of *Ghansatva* has *Vedanahara* (analgesic) and *Sothahar* (anti inflammatory) properties like tablet Diclofenac sodium used as prernedicants.
- *Shigru* did not produce any significant side effects when used as premedicants.
- No significant changes were observed in mean blood pressure, pulse rate, respiratory rate, temperature and oxygen saturation during the whole course of the clinical study.
- The trial drug *Shigru* in the form of *Ghansatva* is almost equally effective comparison to control drug diclofenac sodium (50mg).
- Further a more detailed study on a large number of samples is required to evaluate analgesic and anti-inflammatory properties and unfold other properties of trial drug used as premedicants.

REFERENCES

1. Ambika Dutta Shastri. "Susruta Samhita of Susruta". Edited with Ayurveda Tattava Sandipika; Susruta Sutrasthan, chapter 17; verse 16,17; Varanasi, Chaukhambha Sanskrit Sansthan, 2016, Page No. 95.
2. Sharma P.V. Dravyaguna Vijnana. Vol-II. Varanasi: Choukhamba Visvavharati; 2015. P.111
3. Ambika Dutta Shastri. "Susruta Samhita of Susruta". Edited with Ayurveda Tattava Sandipika; Susruta Sutrasthan, chapter 17; verse 12; Varanasi, Chaukhambha Sanskrit Sansthan, 2016, Page No. 94.
4. Bhavamishra, Bhavaprakasha; Vidyotini with Hindi Commentary by Bhishagratna Pandit Sri Brahmasankara Misra; First Part, Varanasi, Chaukhambha Sanskrit Bhawan; 11th Edition; 2007, PP. 338-340.
5. Prajapati ND, Purohit S.S., Sharma A.K., Kumar T.In: A Handbook of Medicinal Plant A Complete Source Book, 1st ed. Jodhpur, Agrobios; 2003, P.218.
6. Rastogi RP, Mehrotra B.N. Compendium of Indian Medicinal Plants, Central Drug Research Institute, Lucknow and National Institute of Science Communication, Vol 1, New Delhi; 280.
7. Rao CV, Ojha SK, Analgesic effect of Moringa Oleifera Lam, Leaf extract on rats, 2nd World Congress on "Biotechnological Developments of Herbal Medicine". Luknow, India, NBRI; 2003, P.42, MAPA-02-911.
8. The Wealth of India, Council of Scientific Industrial Research, New Delhi, Vol (VI); 1999;426-9.
9. Dr. S.D. Kamat, Dhanvantari Nighantu; Studies on Medicinal Plants & Drugs in Dhanvantari Nighantu; Delhi, Chaukhamba Sanskrit Pratisthan, Delhi, First Edition; 2002, PP-295-297.

Cite this article as:
Champak Medhi, Bhabesh Das. Evaluation of Shigru (Moringa Oleifera Lam) Seed in Sangyaharan in Post Operative Pain Management. International Journal of Ayurveda and Pharma Research. 2017;5(6):80-83.

Source of support: Nil, Conflict of interest: None Declared

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