

## A clinical study on evaluation & comparison of post caesarian analgesia with Ayurvedic and modern medicines

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### Abstract

**Introduction:** Sutika refers to puerperal post partum stage of woman. Puerperium is the period of time encompassing the first few weeks following birth. Puerperium begins as soon as the placenta is expelled for first six weeks. According to Ayurveda different acharyas mentioned different kaals <sup>[3]</sup> in which proper care is necessary for healthy womanhood. After delivery woman becomes weak, exhausted also empty bodied due to physical and mental stress and debility at the level of reproductive organs. Post-operative pain <sup>[4]</sup> management defined as in 1979 an unpleasant sensory and emotional experience associated with actual and potential damage. Post-operative pain managed is a difficult task for any clinician. Here in this research paper analgesia by ayurvedic formulations & modern medicine is compared in 50 patients in each group.

**AIM:** To evaluate & compare analgesia in post-operative caesarian patients by Ayurvedic & modern management.

**Methodology:** Saubhagya Sunthi Paka, Balant Kadha of ayurvedic formulations in Group 1 and Tab. Emanzen-d (diclofenac potassium 50 mg and serratiopeptidase 10 mg) in Group 2 were administered to the patients after 48 hours of post caesarian section.

**Result:** A total no. of 119 patients were recruited in this study out of which 100 patients completed. Each group of 50 patients were treated with Ayurvedic formulations and Modern treatment. Assessment of pain was observed on 3<sup>rd</sup> 5<sup>th</sup> and 7<sup>th</sup> day of post-operative through VAS Scale for both the groups where results showed equal analgesics effect for both the groups. Average duration of stay at the IPD was 7 days. It was observed that Ayurvedic formulations having equally analgesic action as modern analgesics because nobody required modern analgesics in group 1<sup>st</sup>.

**Conclusion:** The administration of oral medication Saubhagya Sunthi Paka, Balantkadha was found to act as an analgesic in post caesarian section cases. This combination maybe an effective alternative for prophylactic antibiotics treatment administered to patients undergoing post caesarian section cases.

**Keywords:** Analgesia, Caesaria Section Pain, Ayurvedic remedy, modern medicine

### Introduction

Pain is a complex unpleasant phenomenon composed of sensory experience that include time, space, intensity, emotion, cognition and, motivation.

More than 80% of patients who undergo surgical procedure experience acute pain and 75% of those post-operative pain report severity as moderate, severe, or extreme. Pain is a percussive public health problem and analgesic drugs play a central role in treatment. Medicinal plants play an important role in folk medicines and different plant species have been used in the treatment of many diseases, to relief pain

Post cesarean pain is managed by combination of analgesics and anti-inflammatory action, to avoid the side effects of Group 2<sup>nd</sup>, these Ayurvedic formulations may be administered to the patients. The side effects of modern analgesics and anti-inflammatory side effects are gastric irritation, nausea, headache, drowsiness, dizziness.

The traditional Indian medicines has mentioned a number of therapeutic cures for common ailments using specific plant parts or their combinations which are free from side effects commonly associated with modern system of medicines.

The Ayurvedic formulations, Saubhagya Sunthi Paka and Balant Kadha have been cited in Samhitas of Yogratanakar <sup>[6]</sup>

and Bhaishajya Ratnavali <sup>[7]</sup>. These ayurvedic formulation have great potential which act on Sutika awastha to rejuvenate dhatu and doshas. It act as doshapachan and kleda pachan <sup>[8]</sup>. Saubhagya Sunthi Paka in which main ingredient is Sunthi (*Zingiber officinalis*), it is widely used around world in food as a spice. The primary pungent agent are due to presence of phylalkylketones or vanilyl ketones. The main constituent of zingiber officinalis are gingerol and shagol which are reported to have antiemetic, antimicrobial, anti – inflammatory and analgesics property <sup>[9]</sup>. It has been found *Zingiber officinalis* inhibits prostaglandins and it interferes with the inflammatory cascade <sup>[10]</sup>. It has been shown that *Zingiber* has pharmacological properties with non-steroidal anti-inflammatory drugs because it suppresses prostaglandins <sup>[11]</sup>.

A number of Dashmoola combination roots of ten plants is standard ayurvedic remedy for treatment of pain. Balantkadha, an Ayurvedic multi ingredient formulation is used as an analgesic, antiarthritic in rheumatism <sup>[12]</sup>. Many of ingredients have been evaluated in experimental model of inflammation and pain <sup>[13]</sup>.

In this study Saubhagya Sunthi Paka and Balant kadha <sup>[14]</sup> was used as an analgesics and anti-inflammatory in caesarian section patients and was compared with modern analgesic and

anti-inflammatory medicines.

**AIM**

To evaluate and compare analgesics and anti-inflammatory action of Ayurvedic formulations with modern medicines in caesarian sections patients.

**Materials and Methods**

In group 1<sup>st</sup> Saubhagya sunthi paka 10 gm, twice a day, along with warm water in rasayan kala and Balant kadha no.1, 20 ml, twice a day, with equal quantity of water after both meal. In group 2<sup>nd</sup> Diclofenac potassium 50 mg and Serratiopeptides 10mg.

**Methods**

The data collected, at Ayurvedic Gynec and obstetrics department of Bharati Ayurveda Hospital, Pune. Total number of patients recruited 119 out of which 100 were completed in the study. In each group 50 patients were included with randomized method during period of 1<sup>st</sup> July 2015 to 31<sup>st</sup> January 2016. These patients recruited after 48 hours of caesarian section. During Nill by mouth state intravenous antibiotics and intramuscular analgesics were given to patients of both groups. After 48 hours of post-operative Ayurvedic formulations were administered in group 1<sup>st</sup> and modern medicines in group 2<sup>nd</sup>. In both group patient was admitted for 7 days and monitored for post-operative pain and after stitches removal patient get discharged and advice for follow up on 15<sup>th</sup> an 30<sup>th</sup> day of post caesarian. After discharge in group 1<sup>st</sup> continued with same Ayurvedic formulations and in group 2<sup>nd</sup> patients were administered iron and calcium to be continued for 1 month. Distribution of patients according to parity was 32 /50 patients were primi para and 18 /50 patients were multi para of Ayurvedic formulation and 26/50 were primi para and 24/50 were multipara in modern analgesics. A detailed history was taken of the patients and laboratory investigations were done like haemogram with ESR and urine routine and microscopy were done on 1<sup>st</sup> and 3<sup>rd</sup> day. Hb% was recorded on 15<sup>th</sup> day of post cessarian.

**Inclusion Criteria**

All patients of post caesarian section cases, patients of all gravida and HIV, VDRL, and HBsAg negative.

**Exclusion Criteria**

Patient having PIH, GDM, Cardiac Disorder, Anaemia (severe less than 7.0 gm %), patient suffering from infection before caesarian, history of previous abdominal surgery.

**Discontinuation Criteria**

Severe illness during study, development of any side effect, if patients develop from severe infection during study, gastritis, hyper pyrexia, excessive wound discharge after dressing.

**Duration**

5 Days in IPD (from 3<sup>rd</sup> day of caesarian till 1 month).

**Follow Up**

After 15<sup>th</sup> and 30<sup>th</sup> day of post caesarian.

**Assessment Criteria**

- To analyses the gradation of pain during medication.

- To analyses the local wound pain.

**Internal Medications**

**Saubhagya Sunthi Paka:** 1<sup>st</sup> dose after 48 hours when shifted to oral diet, 10 gm with warm water in rasayankala 12 hrly

**Balant kadha:** 1<sup>st</sup> dose after 48 hours when shifted to oral diet, 20ml with warm water after both meal.

**Modern medication**

Tab Emanzen-d Diclofenac Potassium 50 mg  
Serratopiptidate 10mg.

**Observations**

Observation were recorded on the basis of subjective and objective criteria.

**Subjective**

Pain assessment was conducted on daily basis as per VAS scale for pain observation taken after giving ayurvedic formulations

**Table 1**

Criteria	Pain observation through vaas scale					
	3 <sup>rd</sup>	%	5 <sup>TH</sup>	%	7 <sup>TH</sup>	%
No pain	0	0	12	24	16	32
Mild pain	24	48	21	42	21	42
Moderate pain	23	46	16	32	12	24
Severe pain	3	6	1	2	1	2

**Table 2**

Criteria	Pain observation through vaas scale					
	3 <sup>rd</sup>	%	5 <sup>TH</sup>	%	7 <sup>TH</sup>	%
No pain	2	4	10	20	21	42
Mild pain	14	28	25	50	20	40
Moderate pain	29	58	15	30	9	18
Severe pain	5	10	0	00	0	00

**Objectives**

BP and pulse were observed in patients, no changes were observed during medications and T IN Temperature were observed in group 1<sup>st</sup> 12/50 (24%) patients and in group 2<sup>nd</sup> 15/50

(25%) patients, due to different reasons like breast engorgement, UTI, URTI, and wound infection.

Dressing of wound was done on 3<sup>rd</sup>, 5<sup>th</sup> and 7<sup>th</sup>

**Investigation**

HB% was observed in 1<sup>st</sup> pre-operative, on 3<sup>rd</sup> day post-operative and 15<sup>th</sup> day of post cessarian, there was maintained hb% after post-operative on 3<sup>rd</sup> and 15<sup>th</sup> day

WBC, Platelets, urine routine and microscopy were done on 1<sup>st</sup> day of pre-operative and on 3<sup>rd</sup> day of post-operative. There was no specific change observed. Urine infection observed in 3 patients but it may she treated with ayurvedic medications.

**Result**

Results shows that in group 1<sup>st</sup> pain relief was observed with Ayurvedic formulations and it was equally effective as modern analgesics in group 2<sup>nd</sup>.

**Discussion**

According to basic principles of Ayurveda pain is mainly due

to vata dosha<sup>14</sup> and for vata vitiation these Ayurvedic remedy plays an important role.

In sutika awastha due to predominance of vata dosha, changes in doshas and dhatus that causes pain. In prasava awastha due to sudden elimination of fetus, there is imbalance of all doshas and dhatus, agnimandyata and kledata<sup>15</sup> were observed and as in sutika awastha uterine involution occurs that also causes pain.

Post-operative caesarian pain is due to the inflammatory changes occurring in the wound. Due to prostaglandins secretion inflammation occurs that causes pain.

Saubhagya Sunthi Paka, BalantKadha are the drugs which help to relieve from pain. So, the present study we may conclude that these Ayurvedic formulations are best and ideal drugs for analgesics action in post caesarian section patients.

Patient's undergone caesarian section, these ayurvedic formulations helps to reduce the pain which occurs due to vata shaman. These drugs having ushna guna property for vatashaman and teekshna for agnimandyata, madhur guna does balancing of the doshas<sup>[16]</sup>.

Balant Kadha Saubhagya Sunthi Paka in which Sunthi is the main ingredients which has been proved for great analgesic and anti-inflammatory action.

Ginger has long history of use of anti-inflammatory action. Gingeber and shagol are two main ingredients in Sunthi<sup>[17]</sup>. Gingeber has been found to inhibit prostaglandins biosynthesis and interfere with inflammatory cascades. It has property of non-steroidal anti-inflammatory drugs<sup>18</sup> because it suppresses prostaglandins and synthesis of inhibition cyclooxygenase1 and cyclooxygenase 2. However gingeber can be suppress leukotriens biosynthesis by inhibition of 5 lipooxygenase.

These two cyclooxygenase and 5 lipooxygenase have better therapeutic principle and few side effects then NSAID'S. Has been proved gingeber modulates biochemical pathway activated in chronic inflammation<sup>[19]</sup>.

It has immune modulator effect<sup>[20]</sup>. In Vitro evidence suggests that ginger has immune modulator effect and is an effective antimicrobial and antiviral agent ginger treated cells showed selectively inhibitory effect to betamethzone by inhibition of cytokrines IL-1 and IL-6 indication action inflammatory effect other ingredients which help in vatashaman deepan and pachan and balya are due to its ushna teekshna and madhura guna property.

Balant Kadha, an Ayurvedic multi ingredient formaulation that has the property of vatashaman due to ushna guna. Many of these ingredients works effectively on inflammation and pain. It has been proved that these ingredients help in reducing pain and have shown to possess anti-inflammtory and analgesic activity<sup>[21, 22]</sup>.

Vata shaman occurs due to madhura rasa having properties of guru and snigdha and predominance of pruthvi and jala mahabhut and ushna veerya having predominance of usna guna present in balant kadha drugs. It acts as shothahara and vatahara drugs. It acts as vata anulomak, agnideepana, kaphaghna, pittashaman, aampachan.

## Conclusion

This study concludes that the use of 3 ayurvedic formulations saubhagya sunthi paka balant kadhano.1 and shatavari kalpa are together effective for providing an analgesic and anti-inflammatory action. It helps in reduction of pain in post caesarian pain and restore immunity in sutika patients.

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