

QUALITY OF LIFE IN WOMEN DURING POST- CAESAREAN RECOVERY- AN AYURVEDIC PROSPECTIVE

¹ Sushma Shankar , ² Anuradha Roy , ³ Manjari Dwivedi

¹ Lecturer (Department of Stree Roga avum PrasutiTantra), Nitishwar Ayurvedic Medical College
And Hospital, Muzaffarpur, Bihar, India

² Senior Assistant Professor, ³ Professor
(Department of Stree Roga avum PrasutiTantra), Faculty of Ayurveda, IMS, BHU, Varanasi, Uttar Pradesh, India

ABSTRACT

During post-caesarean recovery, the puerperal women have a range of immediate, short and long term health needs. These include general post operative needs such as wound care, pain relief etc. and specific post natal needs, such as support and advice related to breast feeding, backache, fatigue etc. The trial drug ‘Panchkola’ has the property of *laghu*(small), *tikshna*(pungent), *sukshma*(subtle) in *guna*(qualities), *katu*(bitter) in *rasa*(taste), *katu* in *vipaka*(digestion conversion of food), *ushna*(hot) in *veerya*(efficacy). Due to these properties, the drug acts in both micro and macro circulation (Srotas or channel) and at both cellular as well as systemic levels. It is having a property of *Vatanulomana*(pacifying *vata*), and because of this, it helps in reducing pain, maintaining bowels, normalizing appetite, good sleep. In the present study, *Panchkola* was made in ‘*churna*(pulvis)’ form as per the method of ‘*churna*’ formation described by *Sharangdhar* . The research work has been conducted on 50 randomly selected females admitted in the *Prasuti Tantra* Labour Ward of Sir Sunderlal Hospital, BHU, Varanasi, who had undergone caesarean section for various indications. They were administered *Panchkola Churna* (100 mg TID) orally with lukewarm *gudodak* (jaggery water as *anupaan*) from their third post-operative day and has been continued in same dose until the post operative day fifteenth. The postoperative patients who were administered *panchkola churna* showed a statistically significant improvement in the quality of life.

Key words : *panchkola*, *sutika*, post-operative, *shastra karma*

INTRODUCTION

Management of a puerperal lady after caesarean section is much more significant than that after a vaginal delivery. Because, vaginal delivery if spontaneous, is a natural procedure in which the *doshas* of the body vitiates according to the mechanisms taking place and then, after the delivery they normalize naturally. But in case of a caesarean section, especially when it is an emergency, the *Sharir doshas* which have undergone change are suddenly shut down from their natural mechanism. So after a caesarean section, the *doshas* are totally in

their disturbed equilibrium (*chaya* and *prakopawastha*). Thus, if the lady even though not doing any type of “*Pragyaparadha*” may develop various types of diseases¹. Or in other words it can be said that the puerperium after a caesarean section is an abnormal puerperium which at any time can result in complications and diseases (*sutika vyadhi*). In Ayurveda, the treatment is aimed not only to correct the affected part but it comprises of correction of the site of its origin (*Utpattisthana*), the channels of circulation (*Srotas*) and the site of disease

manifestation (*Vyadhi sthana*). There is a vivid description of various surgical procedures, especially in *Sushruta Samhita* like various types of *Shashtra Karma*² and its (surgical wound) management as ‘*Vrana ropana*’³ The wound created during a caesarean section is a *Shuddh Agantuja Vrana* and having a prognosis of *Sukhsadhya*.⁴ But if not properly managed, may become difficult to cure.⁵ Thus a proper care for the lady is needed on view of ‘*Vranita*’⁶ as well as ‘*Sutika*’.⁷

The trial drug ‘*Panchkola*’ consists of five herbs *Pippali*(*Piper longum*) , *Pippalimoola*(root of *Piper longum*), *Chavya* (*Piper retrofractum*) , *Chitraka*(*Plumbago zeylanicum*) and *Shunthi*(*Zingiber officinale*) all in equal proportion. It is *laghu, tikshna, sukshma* in *guna, katu* in *rasa, katu* in *vipaka, ushna* in *veerya*.⁸ Due to these properties only the drug acts both in micro and macro circulation (*Srotas*) at both the cellular as well as systemic level. It is having a property of *Vatanulomana*, and because of this, it helps in reducing the pain, maintaining the bowels, good sleep, normalizing the appetite. Also use of *panchkola* has been especially mentioned in various ayurvedic texts for the management of a puerperal woman to overcome the digestion problems, pain etc .⁹The goal of the trial drug on the post-caesarean cases is to attain good pain relief and beneficial effect on other associated

symptoms to ensure maximum mobility and early recovery with good health.

MATERIALS AND METHODS

The registration of cases for the study was done in Prasuti Tantra Labour Ward, S.S. Hospital, IMS, BHU, who have undergone caesarean section. Sixty five patients were registered out of which fifty patients were selected for the study. But patients with the conditions like cardiac disease, hypertension, diabetes, thyroid disorders, liver disorders, any history of gastric ulcers, bleeding piles, fissure etc. have been excluded from the research work. Before registration, the patients were examined to rule out any pathological condition which might influence the various parameters of the study. The crude drugs of *panchkola* were converted to *churna* form in the pharmacy of Indian Medicine, IMS, BHU, as per the method of ‘*churna*’ formation described in *Sharangdhar Samhita*.¹⁰The powdered *Panchkola* was given to the registered cases in a pack of fifty grams. They were administered *Panchkola Churna* (100 mg TID) orally with lukewarm *gudodaka* (as *anupana*) from their third post-operative day and were continued in same dose until the post operative day fifteenth.

OBSERVATIONS AND RESULT

Table 1: Showing ‘Blood pressure’ changes in the registered cases during the observation period-

Blood pressure	D ₃		D ₄		D ₅		D ₆		D ₇		D ₁₅	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
<100/60 mm Hg	10	20	8	16	3	6	3	6	0	0	2	4
Between 100/60 to 150/90 mm Hg	40	80	42	84	46	92	47	94	50	100	47	94
> 150/90	0	0	0	0	1	2	0	0	0	0	1	2

In 80% of cases, the blood pressure was between 100/60 mm Hg to 150/90 mm Hg on

day third and this percentage increased to 100% on day seventh.

Table 2: Showing the amount of blood loss in the form of lochial discharges in the registered cases -

Lochial discharge (no. of pads used)	D ₃		D ₄		D ₅		D ₆		D ₇		D ₁₅	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
No discharge	0	0	0	0	0	0	0	0	3	6	9	18
Mild (1-3 pads)	35	70	42	84	48	96	49	98	45	90	38	76
Moderate (4-6 pads)	10	20	6	12	2	4	1	2	2	4	3	6
Severe (>6 pads)	5	10	2	4	0	0	0	0	0	0	0	0

70% patient had mild blood loss on third post operative day while it reached to 90% on seventh post operative day. 20% cases had moderate discharge on day 3rd while 10% showed severe blood loss. On seventh post operative day only 4% had moderate blood

loss while on fifteenth post operative day, 6% cases had moderate blood loss. There was no severe blood loss from day fifth and onwards.

Table 3: Showing type of lochial discharges during observation -

Type of discharge	D ₃		D ₄		D ₅		D ₆		D ₇		D ₁₅	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Bright red	44	88	28	56	8	16	8	16	0	0	0	0
Reddish brown	6	12	16	32	24	48	12	24	13	26	3	6
Brown	0	0	6	12	17	34	30	60	34	68	36	72
No discharge	0	0	0	0	1	2	1	2	3	6	11	22

Initially on day third, 88% cases had bright red coloured discharges while 6% had reddish brown discharges. Gradually the type of discharge turned from bright red to reddish brown to brown coloured. On day seventh post operative day, 26% had reddish brown dis-

charges, 68% had brown coloured discharges while 6% patient had no discharges.

Table 4: Showing involution of uterus of the registered cases during observation-

Observation days	Mean ± S.D. (cm)
D₃	13.63 ± 0.637
D₄	12.06 ± 0.799
D₅	10.29 ± 0.846
D₆	8.55 ± 1.69
D₇	6.98 ± 0.98
D₁₅	0.64 ± 1.49

The involution of uterus of the selected cases took place normally during the

period of observation. It was observed in centimetres by measuring the fundal height of uterus above the symphysis pubis.

Table 5: Showing abdominal distension among the registered cases during observation period-

Abdomial dis- tension	D ₃		D ₄		D ₅		D ₆		D ₇		D ₁₅	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Absent	11	22	48	96	50	100	50	100	50	100	50	100
Mild	37	74	2	4	0	0	0	0	0	0	0	0
Moderate	2	4	0	0	0	0	0	0	0	0	0	0
Severe	0	0	0	0	0	0	0	0	0	0	0	0

Mild Abdominal distension was observed in 74% cases, while 4% cases showed moderate distension and no one had severe distension on third post-operative day. This decreased sharply and on post-operative day fourth only 4% cases showed mild distension

while no patient had moderate or severe distension. There was no distension from fifth day onwards.

Table 6: Showing occurrence of hyperacidity in the cases during study

Hyperacidity	D ₃		D ₄		D ₅		D ₆		D ₇		D ₁₅	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Absent	45	90	42	84	46	92	49	98	47	94	48	96
Present	5	10	8	16	4	8	1	2	3	6	2	4

On day third of post –operative period, 10% cases complained the problem of acidity. This %age decreased gradually and reached up

to 6% on day 7 and to 4% on day 15 after caesarean section.

Table 7: Showing nausea and vomiting in the registered patients

Nausea	D ₃		D ₄		D ₅		D ₆		D ₇		D ₁₅	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Absent	28	56	49	98	48	96	50	100	50	100	50	100
Present	22	44	1	2	2	4	0	0	0	0	0	0

Nausea was present in 44% cases on day third .This proportion gradually decreased and was absent in all cases from day sixth onwards. Vomiting was observed in only one case on day third and fourth while incidence of

vomiting was absent in remaining all cases on every other day of observation.

Table 8: Showing appetite status in post operative period in the registered cases -

Appetite	D ₃		D ₄		D ₅		D ₆		D ₇		D ₁₅	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Reduced	28	56	6	12	0	0	0	0	0	0	2	4
Normal	22	44	44	88	48	96	41	82	41	82	31	62

Increased	0	0	0	0	2	4	9	18	9	18	17	34
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On day 3rd, 56% cases had reduced appetite while it reached to almost nil till 7th day and in follow up cases. Moreover, 18% cases up to Day 7 and 34% cases up to follow up on

15th day, got their appetite increased from normal. This change in appetite was statistically highly significant.

Table 9: Showing bowel pattern -

Bowel habit	D ₃		D ₄		D ₅		D ₆		D ₇		D ₁₅	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Regular	30	60	40	80	42	84	47	94	49	98	46	92
Increased frequency	0	0	2	4	1	2	0	0	0	0	3	6
Decreased frequency (constipated)	11	22	8	16	7	14	3	6	1	2	1	2

During observation, 22% patients were constipated on 3rd post operative day while 78% had a regular bowel habit. On day seven, 98% cases got their bowel habit regularized while 2% still had constipation. On the follow

up day, 92% cases had a regular bowel habit, 2% still constipated while 6% had complaint of increased frequency.

Table 10: Showing presence of pain in the registered cases

Pain	D ₃		D ₄		D ₅		D ₆		D ₇		D ₁₅	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Absent	3	6	19	38	39	78	48	96	47	94	49	98
Generalised	19	38	0	0	1	2	0	0	1	2	0	0
Localised on stitch line	28	56	31	62	10	20	2	4	2	4	1	02

On day three, 38% case complained of generalised pain all over the body while 56% cases had localised pain on stitch line .On forth day, 38% cases didn't complain of pain while 62% still had localised pain. Gradually the %age of cases with pain decreased. On day

seventh, 96% had no pain, 2% had generalised pain while 4% had localised pain on stitch line. The incidence of localised pain was only 2% on day fifteenth while 98% didn't have any complaint of pain.

Table 11: Mobility of the registered cases

Mobility	D ₃		D ₄		D ₅		D ₆		D ₇		D ₁₅	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
With support	10	20	0	0	0	0	0	0	0	0	0	0
Without support, uncoordinated	18	36	3	6	0	0	0	0	0	0	0	0
Without support, coordinated	22	44	47	94	50	100	50	100	50	100	50	100

On the post operative day third, 44% cases were able to move freely without support in coordinated way. But 20% were able to move only with support while 36% cases could move without support but in uncoordi-

nated way. From post operative day fifth, all cases were able to move freely without any support.

Table 12: Showing the condition of wound

Condition of wound	D3		D7		D15	
	Freq.	%	Freq.	%	Freq.	%
Pain	23	46	1	2	1	2
Redness	7	14	1	2	0	0
Swelling	0	0	1	2	0	0
Discharges	0	0	0	0	2	4
Indurations	0	0	0	0	12	24
Pain with redness	15	30	0	0	0	0
Pain with swelling	1	2	0	0	0	0

Incidence of pain was observed in 46% cases on day third which decreased on subsequent days. On day seven, only 2% cases and on day fifteenth also only 2% cases had incidence of pain. Incidence of redness was present in 14% cases while redness with pain in 30% cases on day third. Pain along with swelling was observed in only 2% cases on day third. The

condition improved on subsequent days with 2% cases of redness and swelling on day seventh. On day fifteenth, 24% cases had indurations while no cases had redness and 2% with pain. Discharges were present in 4% cases.

Table 13: Showing other associated complaints during the period of observation

Other complaint	D ₃		D ₄		D ₅		D ₆		D ₇		D ₁₅	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Fever	1	2	2	4	1	2	0	0	0	0	0	0
Breast engorgement	1	2	12	24	13	26	7	14	4	8	1	2
Pain abdomen	3	6	1	2	0	0	0	0	0	0	0	0
Cough	4	8	9	18	7	14	3	6	3	6	0	0
Cracked nipple	0	0	0		4	8	4	8	5	10	6	12

Among the selected cases, breast engorgement was present in 24% cases on the post operative day fourth, and in 26% cases on the day fifth. Thereafter it subsided gradually. 6% cases complained of pain on the abdomen post operative day third, 2% on the post operative day

fourth and thereafter there was no complaint of pain. Complaint of cough was present in 8% cases on post operative day third, in 18% cases on post operative day fourth, in 14% cases on the day fifth, in 6% cases on post operative day sixth and also on the day sev-

enth. On the fifteenth day no case had this complaint. Occurrence of fever was present in only 4% cases on the day fourth and in 2% cases on day fifth.

DISCUSSION

'Sutika kala' (puerperal period) is the period during which there is a tendency towards the disturbance of *doshika* equilibrium of the body. It is because the 'Sutika' (puerperal lady) is greatly emaciated¹¹ as during pregnancy, a portion of mother's nutrition is utilized by the embryo growing in her womb¹² Also during the whole process of delivery, there occurs a great loss of the body fluid and blood from her body. This loss is even much more in case of a caesarean section.¹³ Moreover caesarean delivery involves a major surgery and the patient also has to suffer from the pain of a large wound along with the other pains of a puerperium. The relief of pain has one of the primary reasons for the development of health care. With the view of this demand, 'Panchkola' was taken as the trial drug as it is a good analgesic and by its *Vata* and *Kaphahar* property, it can also help in bringing the vitiated *Sharirika* and *Manasika doshas* to their equilibrium state thereby maintaining the normal physiology. The action of *Panchakola churna* happens at both macro and micro levels.

Blood Pressure: Status of blood pressure was recorded as it is directly proportional to the circulatory volume of the body as well as the side effects of any drug. But in the present clinical trial, blood pressure of all the patients were in the normal limit. This may be because all of them were in close supervision and were well managed in the hospital and also by the quality of the ingredients of *Panchakola* which are *vata* pacifying in nature that may restrict the fluctuations of these vitals.

Blood Loss and Lochial Discharge

In the puerperal period, there is an importance of the lochial discharge as if the

bleeding is more, then it will hamper the general condition of the female. In this study, the lochial discharges were assessed by asking the number of pads used by the registered cases daily (Table no. 2). Also colour of discharge was observed to know if there is any loss of fresh blood or any abnormality in the discharge (Table no. 3). During the study period, only 4% patients had severe discharge (>6 pads) on the post operative day fourth. As *panchakola* also regularizes *apana vayu*, the bleeding was successfully managed after the administration of *Panchakola*. Also on observing the colour of the lochial discharge, there was no evidence of fresh blood discharge.

Appetite: According to the concept of Ayurveda, *Jatharagni* is responsible for appetite and the optimum metabolism of an individual. Assessment of *Jatharagni* can be done by assessing the state of appetite. Here in this study (Table no. 8), on the post operative day third, 56% of the cases had a reduced appetite which persisted in 12% cases on the post operative day fourth. Also, majority of the cases were having a normal appetite from the post operative day fourth after having the *Panchkola churna* administered for 24 hours. In some cases, the appetite started increasing and till the post operative day fifteenth, 34% of cases showed an increase in appetite as compared to day third of the post operative period of observation. This may be due to the '*Katu rasa*' of the trial Drug which is directly responsible for increase in *Jatharagni* (*Deepana* effect).

Nausea and Vomiting: (Table. No.7). These also were well regularized by the drug because of the regulation of *Vata*.

Hyperacidity: Hyperacidity was present in 10% cases on the post operative day fourth (Table no. 6). Hyperacidity occurs because of increased *Pitta* in the body. However, the *Pitta dosha* did not increase much but just maintained its normal level which is required for the proper metabolism process. That is why, on the post operative day seventh and fif-

teenth, only 6% and 4% cases respectively had the complaint of hyperacidity which is quite negligible as compared to the benefits which occurred in the body after *Panchakola* administration.

Abdominal Distension: Mild abdominal distension was observed in 74% cases (Table no.5), while 4% cases showed moderate distension and no one had severe distension on third post-operative day. This decreased sharply and on post-operative day fourth only 4% cases showed mild distension while no patient had moderate or severe distension. There was no distension on seventh day and also in follow up cases. Thus, distension of abdomen in the selected cases was normalized by the intake of *Panchkola Churna* which may be because of its action on the *Apana vayu*.

Bowel Pattern : *Panchakola* by normalizing the *apana vayu* in the body, showed effect on the bowel pattern of the registered cases (Table no.9). Therefore, the incidence of constipation decreased from 22% on post operative day third to only 2% on the follow up day (post operative day fifteenth).

Mobility of the Patients : Healing of a wound also depends upon the mobility of the affected part as it helps in increasing the local circulation and also prevents the unrequired accumulation of fluid. So mobility was also recorded (Table no. 11). It was observed that almost all cases (94%) had good coordinated mobility. This shows that '*Kapha*' dosha was not much predominant from the post operative day fourth and onwards. Reduction in *Kapha dosha* is again due to the *Kaphaghna* property of *Panchakola*.

Pain: It is well known that increase of '*Vata*' is responsible for pain. Conditions like trauma always increase '*Vata*'. The selected drug has the quality of pacifying '*Vata*'. Because of this, there was decrease in both generalized and localized pain in the selected cases (Table no. 10).

Condition of Wound: During the hospital stay, the patients were being taken care of the hydration. Also *Panchkola* administered took care of balancing their *Jatharagni* (metabolism) and tissue perfusion at macro and micro levels. So when the wound was examined for any local morbidity (Table no. 12), it was found that on the post operative day third, 46% patients were having pain only while 30% were having pain with redness. These conditions improved gradually as on post – operative day seventh, only one patient complained of mild pain and only one patient had redness on the stitch line. On the follow up day (post-operative day fifteenth), no patient complained of redness, 4% had discharges from the wound while 24% patients had indurations around the stitch line and 2% complained of pain but the wound was healthy. The cause of indurations and discharges may be because of the unhygienic conditions and carelessness of the patients while they were at home.

Other Associated Complaints: Other complaints like fever, breast engorgement, pain abdomen, cough, cracked nipple etc. were also present in some cases (Table no. 13).

These complaints were also regularized to some extent. It was observed that fever which was present only in few cases and was mostly associated with breast engorgement as it subsided after the milk extraction. There was some effect of the drug on the complaint of cough. Cough was present in 8% cases on post operative day third, in 18% cases on post operative day fourth, and in 6% cases on post operative day seventh and was almost absent on the post operative day fifteenth. It might be possible because of the *Kapha-Vata-hara* property of *Panchakola*.

On the basis of the above observations, we can say that *panchakola* is a very good drug for the post caesarean cases which has the properties of relieving these patients from most of

the post-operative complaints along with the general problems of puerperal period.

CONCLUSION

Success of positive outcome of caesarean section in the delivered women is directly proportionate to the post-operative care. According to Ayurvedic classics aggravation of *vata* causes many complications as *vedana* (different types of pain), *nidra-nasha* (disturbed sleep), disturbed appetite and bowel patterns, depressions, anxiety, etc. So *Panchakola* was chosen for trial as it has *shool-prashamana*, *deepan*, *pachana*, *shothahar*, *vatanuloman*, *kapha shamaka* etc. properties. In this study it has been found that *Panchakola* reduced general as well as local untoward symptoms like nausea, hyperacidity, pain, improved bowel pattern, sleeping pattern, mental status, appetite, mobility etc. of the patients. Due to its action on different *doshas* at microcirculation levels, it might have increased local circulation, so better healing of caesarean section wound with less swelling, redness, discharges etc. occurred resulting in pain reduction at wound area. Due to less pain, better appetite and good sleep, patient's mobility and post-operative general feelings were better. Since the study has been conducted with small number of patients, study on bigger sample may reconfirm the findings.

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CORRESPONDING AUTHOR

Dr. Sushma Shankar

Lecturer (Department of Stree Roga avum
PrasutiTantra), Nitishwar Ayurvedic
Medical College And Hospital, Muzaffar-
pur, Bihar, India

Email: drsushmashankar@gmail.com

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