AYURVEDIC MEASURES TO MINIMIZE CAESAREAN DELIVERIES
- REVIEW ARTICLE

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ABSTRACT
Caesarean delivery has come a long way since the start of last century. It is fascinating to trace its journey from being a procedure of last resort to save the mother's life to one that could save the baby. More recently the procedure is becoming choice of delivery in the patients with or without perfect indication. Though the availability of antibiotics, the progress of anesthesiology, the availability of blood and blood products have rendered the caesarean section feasible and relatively safe in the last century; it is a surgical procedure which may followed by immediate or remote complications. Ayurveda aims not only to deal with disease and its treatment but also to work in harmony with the human body's anatomy, physiology, physical & mental well being and not against them.

Management of pregnancy from first month of conception to onset of labour has been well explained as 'Garbhini Paricharya' in Ayurvedic granthas and further gives idea of preconceptional treatment for shukra and artava i.e. sperm and ovum which can prevent chromosomal and congenital defects in foetus. By following the 'Garbhini Paricharya' high risk pregnancies can be prevented with its better outcomes and normal labour without complications can be achieved in uncomplicated cases. These Ayurvedic measures surely minimize the need of caesarean section in relative indications and thus undue surgical interventions can be prevented.

Keywords: Garbhini Paricharya, Asthapan basti, Anuvasana basti, Garbhopghatkar bhava

INTRODUCTION: Now a day, the number of caesarean deliveries is rapidly rising. Its incidence is 21.6%. Out of them 32.9% patients have elective C-section while rest 67.1% need surgery in emergency[1]. It is the abdominal delivery of the baby by laparotomy and section of uterus after twenty eight weeks of pregnancy. The absolute indications of C-section are like severe degree of cephalo-pelvic disproportion, major degree placenta praevia, pelvic mass obstructing the birth canal, umbilical cord prolapse, malformations precluding vaginal delivery, malpresentations etc.[2]. These are the complications where a vaginal delivery is either impossible or associated with considerable maternal or foetal morbidity. In such cases, the procedure definitely becomes god gift for mother and baby. There are some relative indications of caesarean delivery like borderline cephalo-pelvic disproportion, cervical dystocia, pre-eclampsia/eclampsia especially remote from term, suspected foetal distress, bad obstetric history, breech presentation at term, intra-uterine growth retardation, severe oligohydramnios, prolonged pregnancies etc. In these indications, vaginal delivery is not automatically precluded in all instances. Management depends upon the unique circumstance of each case. Decision is usually reached
after weighing the risks and the benefits in that particular case. Apart from above indications, several other ethical, medical, economical and medicolegal factors like elderly primigravidae, decreased maternal response to face labour pains and social awareness regarding medical services play an important role in the rising rate of C-section. Sometimes caesarean delivery is being performed on maternal request at term in the absence of any medical or obstetrical indication. Due to adoption of small family norm, neither the obstetrician nor the patient desire to take even slightest extra risk of normal labour. Although the safest route of delivery is an uncomplicated vaginal delivery, at this time no one is able to predict about achievement of better outcome. Thus the procedure has become an alternative to vaginal delivery even in uncomplicated pregnancies and given the alarming rise in incidence over the last decade.

Though C-section is and will remain one of the commonest surgeries an obstetrician will undertake, it is against the natural mode of delivery. It has its own complications those may be immediate like anesthetic hazards, hemorrhage, acute infections as peritonitis etc. and may be remote like incisional hernia, vesico-vaginal fistula, failing lactation, menstrual disorders etc. In absolute indications, the complications of C-section can be ignored to save the life of mother and baby. But its number existing for relative indications can be minimized. For this purpose, the programme should be aimed to reduce the high risk pregnancies.

For better outcomes of pregnancies, Ayurveda has described line of management early from preconceptional stage and continued throughout pregnancy up to delivery. By following these guidelines sincerely, the rate of pregnancy complications can be reduced. In this way, the number of uncomplicated vaginal deliveries will get enhanced without interfering nature.

**Literature Review**

Ayurvedic text, *Sushruta Samhita* has explained that for better outcomes of pregnancy, there is need of combination of four healthy factors. It has given the example of a plant. [3] Four things are required for a plant to come in existence like seed, ground, water and perfect season. Similarly, conception also requires four factors as *rutu* (ovulation), *kshetra* (uterus), *ambu* (nutrition) and *beej* (sperm and ovum). All factors should be in proper and healthy form. Signs and symptoms of *shuddha shukra* and *artava* i.e. healthy sperm and ovum as well as signs and symptoms of *dushta shukra* and *artava* i.e. unhealthy sperm and ovum have been explained [4]. Before conception, treatment for *dushta shukra* and *artava* is also described in *samhita* [5]. By this preconceptional treatment many chromosomal defects and congenital malformations which lead to C-section can be prevented.

The management of pregnancy since conception to delivery termed as *Garbhini Paricharya* is described in detail in Ayurveda. It includes some dietary and lifestyle modifications during pregnancy. According to Ayurveda, *purush* (human being) is made from *ahaar-rasa* which contains micro-nutrients [6]. In pregnancy dual action of maternal *ahaar rasa* is seen. One is used for nutrition of maternal body and another is responsible for nutrition and growth of foetus. In each month of pregnancy, requirements of foetus remain changing as per its growth. In *Garbhini*
Paricharya diet of pregnant woman for each month of gestation is well explained.

During early months of pregnancy, cold milk is advised\(^7\). In the first month, foetus is in cellular stage like morula and blastula. Milk contains fats and proteins which are structural components of cell membrane. Milk, processed with madhur aushadhi, honey, butter and ghrita has been advised in second, third, fourth and fifth month of pregnancy respectively. The addition of jangal maans rasa in diet is advised in fourth month of pregnancy by Sushruta Samhita as it is less kledakar\(^8\). Ayurveda perfected a method of supply of micronutrients in bio-available form through the use of herbal medicines with respective properties. When these medicines are given with milk, butter or ghrita which are rich sources of proteins and natural fats, their efficacy get enhanced. Milk has balya property which helps in maans shonit upachaya. This diet plan of Garbhini Paricharya helps to prevent the pregnancy complications occurring mainly due to protein deficiency like oligohydramnios and intra-uterine growth retardation of foetus which are the relative indications of caesarean deliveries.

Similarly optimum maternal nutrition and daily adequate food intake including meat recommended by Sushruta in pregnancy ensures maternal health promotion, restricts poor pregnancy weight gain and nutritional anaemia which always become troublesome for normal labour.

In sixth month of pregnancy, Sushruta Samhita recommends Gokshur (Tribulus terrestris), an Ayurvedic diuretic and rasayan, in Garbhini Paricharya\(^9\). Water electrolyte metabolism is affected during pregnancy physiologically so that volume of water, sodium and potassium get increased. Their retention causes oedema. Gokshur is murta, rasayana, deepan and helps to decrease oedema due to hypoproteinaemia and also helps to prevent pregnancy induced hypertension. "Oedema, proteinuria, hypertension" this classic triad is called pre-eclampsia which has become the most common indication of C-section.

Ghrita processed with Pruthakparni (Urzaria picta) is advised in seventh month of Garbhini Paricharya\(^10\). Pruthakparni is balya and having garbhaposhak property. Ghrita contains fatty acids which provide essential components and minerals through umbilical cord to foetus. It avoids placental calcification and regulates foeto-placental circulation. Thus foetus gets well nourished. At the same time due to its snigdha and vyavayi properties, ghrita helps to maintain utero-placental transporting pathway functionally clear so that utero-placental insufficiency may not happen. In this way the rate of foetal distress may be lowered which always become emergency for C-section.

In eighth month of Garbhini Paricharya, bastikarma has been recommended by Acharya Sushruta\(^11\). According to him, asthapan basti which is shodhan basti, should be given first to garbhini. It removes constipation and leads to vatanuloman. As per Ayurveda, garbhnishkraman kriya i.e. expulsion of foetus through birth canal in normal labour is carried out by apana vayu which should be in its anulom gati i.e. downward direction. Asthapan basti should be followed by anuvasan basti which is shaman basti. These should be administered in pregnant woman alternately up to delivery. The bastikarma, given in the last two months of pregnancy, keeps vayu in its prakrut form. This
prakrut vayu helps to stay foetus in normal position in uterus and does not allow malpositions and malpresentations like face, brow, breech etc. Conduction of normal labour with these mal-presentations is very risky and finally caesarean delivery gets planned. Vatanuloman by vatashaman action of anuvasana basti also helps to descend the head of fully floating foetus in borderline cephalo-pelvic disproportion at term.

The incidence of post term pregnancies is approximately 10% of all singleton pregnancies which continue beyond forty two weeks of gestation and 2-7% continue beyond forty three weeks in the absence of obstetric intervention (12). Foeto-placental factors have been reported as predisposing to post term pregnancy which is associated with both foetal and maternal risks. In this situation delivery should be affected immediately if there is evidence of severe oligohydramnios or foetal compromise. Thus the case comes under the consideration for C-section. As per Ayurveda, all the movements and actions in human body are carried out by vayu. So the vayu, regulated by bastikarma, improves tone of uterine, cervical, pelvic and generalized muscles. It helps in onset of labour at term by improving receptor site actions and enhances the effects of prostaglandins and oxytocin. In this way the risk of post datism gets prevented.

In ninth month of pregnancy, tampon of medicated oil in vagina of pregnant woman is advised in Garbhini Paricharya by Charak Samhita (13). It lubricates and soothens vagina. It increases elasticity of muscles of birth canal and perineum which leads to easy expulsion of foetus. It also helps in gradual ripening of cervix of uterus which always occurs four weeks prior to onset of labour. Thus it prevents cervical dystocia and obstructed labour where caesarean delivery becomes necessary.

Apart from Garbhini Paricharya some factors are discussed as Garbhopghatkar bhava in Ayurvedic ancient granthas (14). The pregnant woman should avoid these factors in her day to day life for better outcome. It is not permissible for her to see in deep well so that she can put herself away from trauma over abdomen. It may cause the abruption of placenta which is the absolute indication of emergency C-section. Similarly garbhini should not travel through jerky vehicles as it may give malpresentation. In Charak Samhita, it is also mentioned that the garbhini should not sleep always in supine position as it leads to looping of umbilical cord around the foetal neck. Today it is being observed, how the incidence of caesarean delivery is rapidly increasing due to this reason.

Not only physical health but also mental health of pregnant woman has been taken under consideration by Acharya Sushrut (15). Her psychological fitness definitely affects her foetus and helps her to face labour pains during normal delivery.

CONCLUSION
Ayurveda is a science of life which always focuses on preventive aspects of diseases by means of specific rules and regulations. Concept of Garbhini Paricharya is one of the aspects described in Ayurvedic Samhitas. It not only supports maternal and foetal health but also boosts normal delivery.

Garbhini Paricharya helps to prevent high risk pregnancies like oligohydramnios, intra-uterine growth retardation, pre-eclampsia, nutritional anaemia, malpresentation, foetal distress, post term or prolonged pregnancy, cervical
dystocia etc. These pregnancy complications play an important role in the rising trend of caesarean section in which vaginal delivery is not automatically precluded in all instances. Above discussion and references can conclude that the implementation of Garbhini Paricharya definitely helps to minimize the incidence of caesarean deliveries in relative indications. These measures can be considered for inclusion in national antenatal care programmes

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