



## Case Report

## Management of threatened abortion through Ayurvedic intervention: A case report

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## ABSTRACT

Untreated vaginal bleeding during pregnancy can potentially give rise to various complications, with the incidence ranging from 12% to 40% of all cases. In Ayurveda, this condition is referred to as *garbhasrava*, which encompasses the manifestation of abortion, with *raktadarshana* (vaginal bleeding) serving as a key diagnostic symptom.

In this present case study, 28 years old second gravida woman with amenorrhea of 3 months 08 days presented with vaginal bleeding (1 pad/day) for 15 days on and off. The case was diagnosed as first-trimester vaginal bleeding due to low-lying posterior placenta (placental cause). Pregnancy outcome depends on the severity of bleeding thus early diagnosis and proper management are the priority. Traditionally, the conventional approach involves the use of hemostatic agents and injectable hormonal support, which is an invasive method. In this present study, a local non-invasive method i.e application of *gairika choorna* 5 g with *shatadhauta ghrta* 15–20 g in the form of *lepa* (anointment) below the umbilicus was advised thrice a day for 1 week. This treatment resulted in complete relief from vaginal bleeding within a one-week period while maintaining the pregnancy.

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## 1. Introduction

Bleeding during the early stages of pregnancy is a relatively common occurrence in obstetrics. While not all instances of bleeding necessarily result in a miscarriage, there are situations where it can lead to complications such as slowed fetal growth, intrauterine fetal demise, preterm birth, or premature rupture of membranes. First trimester vaginal bleeding is one of the major risk factors for preterm birth of which the severity, duration, and period of vaginal bleeding play an important role in pregnancy outcome [1]. There are many causes of first-trimester bleeding of which abortion, ectopic pregnancy, hydatidiform mole, implantation bleeding, and sub-chorionic hematoma are common [2]. Various incidents of early pregnancy bleeding has been reported ranging between 12% and 40%. When left untreated, bleeding or spotting during pregnancy can potentially escalate into serious and even life-threatening situations for both the mother and the developing fetus. Therefore, it is crucial for all healthcare providers to prioritize

early diagnosis and prompt intervention, as the risks associated with bleeding tend to rise if left unaddressed." [3].

In Ayurveda, abortion up to the fourth month of pregnancy is termed as *garbhasrava* [4]. This could be correlated with threatened abortion. This is characterized by *raktadarshana* and pain in uterus, lower back, inguinal region and pelvic region [5].

Faulty diet, behavior (excessive physical exercise, jerking, suppression of natural urges, etc.), and psychological factors (anger, fear, grief) are responsible for abortion [6].

One of the management protocols of abortion is sprinkling, bath, and anointment with cold items is advised [5]. Anointment with *shatadhauta ghrta* below the navel is advised in the management of bleeding in abortion [6].

In the present time, the entire management of early pregnancy bleeding has changed from in-patient care services and emergency surgical management to outpatient care with immediate conservative or elective surgical management [7]. The local application of *gairika choorna* and *shatadhauta ghrta* below the umbilicus region shows an encouraging result in maintaining pregnancy by controlling bleeding. Thus it may be effective in reducing both maternal and perinatal morbidity and mortality and overall pregnancy outcome.

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## 2. Case presentation

### 2.1. Patient information

A 28 years old female, well built, with a height of 162 cm, 62 kg weight, and married for 8 years. She was multigravida (gravida 2, para 1) with her last menstrual period on 26.08.2020 and amenorrhea of 3 months 08 days.

### 2.2. Chief complaints

The patient presented with vaginal bleeding (1 pad/day) for 15 days off and on, nausea and vomiting off and on for 3 months, and was associated with general weakness.

### 2.3. History of present illness

The patient had bleeding *per vaginam* for the last 15 days, and the bleeding was painless fresh, off and on. It was not associated with any trauma, uterine contractions, or cramps, and was in clot form. The colour of the bleeding was dark red, with minimal bleeding as spotting (few drops/small clots). She was using Stayfree secure regular sanitary pads (1 pad/day) on her first visit to the hospital. She also had nausea and vomiting off and on for the last 3 months, and physical weakness was also present.

### 2.4. History of past illness

There was no such complaint of bleeding *per vaginam* in her previous pregnancy. No significant past history of illness in terms of general illnesses like diabetes mellitus, hypertension, thyroid dysfunction, gastrointestinal ulcers, piles, fissure, and fistula. No medication has been taken by the patient before coming to the hospital. No family history of the same or related illness found in any of her family members was reported. The patient was on a mixed diet. No history of tobacco, alcohol, or other addictions. Her obstetric history revealed she was gravida 2 para 1. Her last pregnancy was 6 years ago and ended in a full-term normal vaginal delivery of an alive female baby of 2.96 kg.

### 2.5. Clinical findings

The patient's detailed history was noted, and on examination, she was well-oriented with time, place, and person, with stable vitals. Her blood pressure measured in OPD was 100/70 mmHg (in a sitting position) on the day of her first visit. On general examination, she was pallor. Cardiovascular and respiratory system examinations were within normal limits. Per abdominal examination was normal. The sanitary pad observed minimal bleeding as spotting (few drops/small clots) with dark red color. On speculum examination, the cervix was found coated with dark red bleeding, which was from the cervical os. The vaginal examination was withheld to avoid un-due handling of the uterus considering the bleeding situation as USG is easy, and available.

## 3. Differential diagnosis

First trimester vaginal bleeding due to implantation sign, spontaneous abortion, ectopic pregnancy, trophoblastic disease (hydatidiform mole), and other causes like cervical polyp, cervical or vaginal trauma secondary to sexual activity were taken as differential diagnoses. But all have symptoms in addition to vaginal bleeding and are diagnosed by proper history, USG, and blood tests.

## 4. Diagnostic assessments

USG findings as of 14.11.2020 showed 11W5D intrauterine pregnancy with low lying posterior placenta (Fig. 1). Blood investigation showed Hb-10.6 gm/dl with normal platelet count. Thyroid function test values were within normal limits (Table 1).

## 5. Diagnosis

Based on the history and detailed clinical examination, the diagnosis was made first-trimester vaginal bleeding due to low lying posterior placenta (placental cause).

## 6. Therapeutic intervention

Based on the Ayurvedic principles of treatment, the drugs were selected which could pacify *pitta, vata dosha* and also act as *garbhasthapana* (stabilizing the intra-uterine fetus) in this case. Local application of *gairika choorna* 5 gms with *shatadhauta ghrita* 15–20 g in the form of *lepa* below the umbilicus was advised thrice a day for 1 week. The patient was counseled and advised to take bed rest and a light diet. She was advised to take *Phalaghrita* 3 gms twice a day with warm milk 40 ml. Supportive management as *per antenatal* protocol was given as iron, calcium, and folic acid supplements.



Fig. 1. USG plate of the patient as on 14.11.2020.

Table 1  
List of investigation.

Date	Investigation	Result
15/11/2020	Hb	10.6 gm/dL
15/11/2020	Platelet count	1.86 lakh
15/11/2020	Sr. TSH	1.7 mIU/L
14/11/2020	USG	11 W 5D intrauterine pregnancy with a low-lying placenta

## 7. Outcomes and follow-ups

Bleeding *per vaginum* was completely relieved in one week period. The regular antenatal follow-ups were continued and she delivered a full-term female baby by spontaneous vaginal delivery in a private set up due to pandemic issues. During follow-up, USG was avoided for the same reason.

## 8. Discussion

Pregnancy during the first trimester is a dynamic period and pregnancy outcome is directly related to gestational age and severity of vaginal bleeding. Any bleeding generates anxiety and stress for the mother and the family related to the pregnancy outcome. There is an increased risk of pre-term delivery, intra-uterine growth retardation, and also abortion in cases of early pregnancy bleeding due to low-lying placenta. Though the low-lying placenta has no specific management, but bleeding can be effectively treated before excessive blood loss leads to foeto-maternal complications. In the conventional system of medicine, hemostatic agents and hormonal support (progesterone and hCG) are widely used in injectable forms along with adequate bed rest. Though low-lying placenta migrates with the growing uterus, any amount of bleeding during pregnancy requires immediate attention and management, as it affects both the physical and psychological state of the pregnant lady and subsequently the fetus too. Thus, an Ayurvedic approach is taken in this particular case to manage the bleeding due to low lying placenta. The objective of the treatment selected for the patient was mainly to pacify *pitta*, *vata dosha*, and also for *garbhasthapana*. Ayurveda advocates four-fold remedies to arrest any bleeding. They are *sandhana* (unification) with *kashaya dravya* (astringent drugs), *skandana* (use of coagulant) with *hima dravya* (cold substances), *pachana* (desiccation) with *bhasma* (ash of linen), and *dahana* (cauterization) that causes contraction of blood vessels [8]. In the event of vaginal bleeding during pregnancy, the application of a *lepa* (anointing) containing *shatadhauta ghrita* below the umbilicus is recommended as an intervention to both check the bleeding and stabilize fetus. [6].

### 8.1. Pharmaceutical preparation and probable mode of action

In this present study topical application of *lepa* prepared with *gairika choorna* (red ochre, anhydrous iron oxide) and *shatadhauta ghrita* is prescribed for managing the first trimester bleeding. Through a proper base, the active principles of the ingredients of *lepa* are released, which then enter into the *romakupa* (hair follicles) and get absorbed through the *swedavahi srotas* and *siramukha* (microcirculation presents in the skin) and reaches the desired site of action and pacifies the provoked *dosha* [9]. *Gairika* is classified under *shonitasthapana mahakashaya* (group of drugs having hemostatic action) [10], is having *kashaya* (astringent) and *hima* (cold) properties [11] arrest the bleeding by virtue of *sandhana* (astringent) and *skandana* (cold) properties. It is one of the drugs used externally and known for its *vata* and *pitta* pacifying and hemostatic properties [12]. *Shatadhauta ghrita* is a natural permeation enhancer in topical products. It is prepared by pressure washing cow's ghee 100 times with water [13] and acts as a vehicle (base) for drugs to be applied externally. It is an oil-in-water kind of emulsion. In this fat splitting process, fat is hydrolyzed in the presence of water to yield free fatty acid and glycerols and pressure accelerates the process of hydrolysis. In *shatadhauta ghrita*, due to the continuous washing and pressure applied during rubbing, the particle size of fat granules get reduced makes the product non-sticky, homogeneous, with a large surface area, which makes it easy to apply on skin and may result in an increased rate of absorption

through the skin [14]. Washing results in the formation of a homogeneous mass of oil in water emulsion with better consistency and viscosity which helps in its topical application. Due to continuous washing and rubbing during the preparation, *shatadhauta ghrita* becomes very *sheeta* (cold), *sukshma* (minute particles), *shlakshna* (non-sticky), and *mridu* (soft). All these properties are responsible for *stambhana karma* (hemostatic action) [15]. It also acts by the principle of *skandana* (cold property) and thus checks the bleeding. It alleviates *pitta*, *vata dosha* and stabilizes the fetus by the same pharmacodynamic properties.

The result of this current study indicate that Ayurvedic approach may be effective in the management of first-trimester vaginal bleeding of mild to moderate degrees. This combination of non-invasive Ayurvedic intervention with *gairika choorna* and *shatadhauta ghrita* acts not only as hemostatic but also stabilizes the fetus.

### 8.2. Strength and limitations

There is limited work on how Ayurvedic principles work efficiently to cease vaginal bleeding of placental cause by non-invasive intervention. The strength of this work is that the scholars have used only Ayurvedic methods of intervention which are easily available, cost-effective, and non-invasive. Limitation: *Lepa* should be freshly prepared and has to be applied thrice a day.

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### Authors contribution

**Anuradha Roy:** Conceptualization, Methodology/study designing, Data collection, Data curation, Formal analysis, Investigations, Resources, Writing-original draft, Review and Editing, Visualization and Supervision. **Binay Sen:** Conceptualization, Methodology/study designing, Formal analysis, Resources, Writing-original draft, Review and Editing, Visualization and Supervision. **Monisha VM:** Conceptualization, Formal analysis, Investigations, Data curation, Writing -original draft.

### Conflict of interest

There is no conflict of interest.

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