RESEARCH
O&G Forum 2024; 34 – 3s: 985-988

Molar Pregnancy Management Through Ayurveda: A Case Study

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ABSTRACT
Background: Fatal development is crucially monitored to anticipate and manage potential health issues during pregnancy. This study investigates the effects of Ayurvedic medicine on managing molar pregnancies, evaluating both fetal development and maternal health outcomes in a challenging clinical context.
Methods: This case study evaluates the effectiveness of Ayurvedic treatments focused on balancing the vata and pitta supporting systemic health in a patient with a molar pregnancy, twin fetuses, and concurrent chemotherapy, tracking fetal growth through transabdominal ultrasound at multiple gestational stages.at 15, 18, 25, and 29 weeks of gestation.
Results: The study provided consistent data across both fetuses, showing normal growth patterns. By the 29th week, significant growth was noted: Twin A weighed 1359 grams with a of Biparietal Diameter (BPD), 7.83 cm, Head Circumference (HC) of 28.92 cm, and Abdominal Circumference (AC) of 24.21 cm; Twin B weighed 1599 grams with a BPD of 7.87 cm, HC of 28.08 cm, and AC of 26.53 cm. Both twins displayed steady increases in all measured parameters over the course of the study, with no major health issues detected.
Conclusion: The integration of Ayurvedic medicine with conventional prenatal care was associated with healthy fetal development in a twin pregnancy of the patient. Both fetuses demonstrated consistent growth within the normal range across all observed parameters. This study supports the potential benefits of a combined Ayurvedic and conventional care approach during pregnancy.
Keywords: Fetal development, Twin pregnancy, Ayurvedic medicine, Prenatal care, Ultrasound monitoring, Fetal biometry

Introduction

Molar pregnancy, or gestational trophoblastic disease (GTD), involves abnormal growth within the placenta, leading to conditions like persistent trophoblastic disease (PTD) and potentially malignant choriocarcinoma [1]. Prompt uterine evacuation through suction or curettage is critical upon diagnosis to prevent severe complications. While over 80% of cases are benign with a generally favourable prognosis, about 10 to 15% may advance to invasive moles, risking serious issues like haemorrhage [2]. Additionally, 2 to 3% of these moles could develop into choriocarcinoma, an aggressive and metastatic cancer, underscoring the importance of vigilant follow-up [3]. Molar pregnancies are classified into complete and partial moles, each with distinct clinical features and management challenges. Typical treatment involves the removal of molar tissue and careful monitoring of human chorionic gonadotropin (hCG) levels to prevent disease progression [4]. After treatment, monitoring of serum hCG levels continues until they decline to undetectable levels, as hCG is a reliable indicator of persistent trophoblastic activity. In instances where the condition becomes invasive or metastatic, chemotherapy, often effectively treated with agents such as methotrexate, may be necessary [5]. Balancing molar pregnancy with concurrent conditions like cancer adds complexity to care, impacting both physiological and psychological aspects. While Western medicine addresses urgent molar tissue management, holistic patient needs, including well-being and quality of life, may require additional attention [5]. Ayurveda, the ancient Indian system of medicine, offers a unique perspective on health and disease, emphasizing the balance of three fundamental bodily humors or doshas: Vata, Pitta, and Kapha [6]. Pregnancy and conception are viewed through the lens of these doshas, with a particular focus on ensuring their equilibrium to support maternal health and fetal development. The Ayurvedic remedies like Ghee, Leptaden, and Aloe Compound are often recommended due to their properties that align with the constitutional needs of Vata and Pitta doshas, which are crucial in the context of pregnancy [6]. Despite the prevalence and advanced management techniques in conventional medicine for molar pregnancy, there is an observable gap in comprehensive care models that integrate alternative medicinal approaches like Ayurveda. This study aims the impact of Ayurvedic medicine on the management of molar pregnancy and evaluate fetal development outcomes and for one patient, maternal health was managed as a challenging clinical situation.

Methodology

Study Design

This study is a detailed case study, analyzing the effectiveness of Ayurvedic treatments on a patient with molar pregnancy, complications including twin fetuses, and concurrent cancer treatment with chemotherapy.

Participants

Participant Inclusion: A single case involving a 28-year-old pregnant woman diagnosed with molar pregnancy, containing twin fetuses, and undergoing cancer treatment.

Data Collection Period: From the initial diagnosis through the 29th week of pregnancy.

Ayurveda Interventions:

The patient's characterized as a predominantly Vata-Pitta constitution, which played a crucial role in tailoring the Ayurvedic treatment approach.

Descriptions of Ayurvedic treatments used, including:

- Ghee at night to reduce infertility.
- Aloe vera gel juice with honey three times daily for ovum release.
- Leptaden for prevention and control of pregnancy.
- Dhatreelauha for iron deficiency.
- Dec sukumaram and Phalasarpis for general prenatal care.

Conventional Treatments: Gynecological supplements including Vitamin B6 and folic acid, along with regular monitoring of Human Chorionic Gonadotropin (hCG) levels.

Monitoring and Outcomes

Weekly monitoring of human chorionic gonadotropin (hCG) levels was conducted to assess the progression of the molar

pregnancy. Ultrasound scans were performed at multiple stages—15, 18, 25, and 29 weeks—to monitor fetal growth and amniotic fluid levels, as well as to perform Doppler examinations of fetal blood flow.

Data Collection Methods

- Clinical Follow-up: Weekly clinical assessments and recording of hCG levels.
- Ultrasound Examinations: Detailed fetal biometry was conducted at 15, 18, 25, and 29 weeks of gestation, including assessments of fetal growth, amniotic fluid volume, and Doppler studies of blood flow in fetal arteries.

Data Analysis

- Qualitative Analysis: Case study narrative compiling all medical interventions, ultrasound findings, and outcomes related to the molar pregnancy.
- Quantitative Analysis: Examination of the progression of hCG levels, fetal growth metrics (BPD, HC, AC, FL), and Doppler study results across the weeks.

Results and Discussion:

Upon reviewing fatal development across several weeks, the following key observations were made:

Case Summary: A 28-year-old female diagnosed with a twin molar pregnancy and concurrently battling cancer was subjected to a combination of Ayurvedic medication and conventional treatments. The Ayurvedic regimen included ghee at night for infertility reduction, aloe vera gel juice with honey thrice daily for ovum release, and Leptaden also administered at a similar frequency for pregnancy management. Iron deficiency was addressed with Dhatreelauha, while Dec sukumaram and Phalasarpis were taken for prenatal care. Additionally, the patient received conventional supplementation including Vitamin B6 (50 mg twice daily) and folic acid (5 mg daily). Furthermore, the patient's Human Chorionic Gonadotropin (hCG) levels were monitored weekly, showing initial levels of 82 micro/liter, with subsequent readings at 57, 50, 61, and 66 over five weeks showing a fluctuating yet overall stable trend

Table 1: **Progressive Developmental Metrics for Fetus A Over a 29-Week Period**

Gestational Age	Biparietal Diameter (BPD)	Head Circumference (HC)	Abdominal Circumference (AC)	Femur Length (FL)	Crown-Rump Length (CRL)	Fetal Heart Rate (FHR)	Fetal Weight (FW)	Amniotic Fluid Index (AF1)
15 weeks	2.91 cm	10.56 cm	8.56 cm	1.24 cm	9.09 cm	-	96 g	2.74
18 weeks	44.3 mm	162.4 mm	130.9 mm	27.8 mm	-	157 bpm	250 g	-
25 weeks	6.60 cm	24.47 cm	21.71 cm	4.48 cm	-	-	848 g	-
29 weeks	7.83 cm	28.92 cm	24.21 cm	5.54 cm	-	-	1359 g	4.66

Table 2: Progressive Developmental Metrics for Fetus B Over a 29-Week Period

Gestational Age	Biparietal Diameter (BPD)	Head Circumference (HC)	Abdominal Circumference (AC)	Femur Length (FL)	Fetal Heart Rate (FHR)	Fetal Weight (FW)	Amniotic Fluid Index (AF1)
15 weeks	2.71 cm	10.04 cm	7.94 cm	1.28 cm	-	91 g	3.02
18 weeks	43.8 mm	163.2 mm	142.2 mm	27.7 mm	153 bpm	272 g	-
25 weeks	6.58 cm	24.99 cm	20.49 cm	4.66 cm	-	818 g	-
29 weeks	7.87 cm	28.08 cm	26.53 cm	5.76 cm	-	1599 g	4.7

As shown in Table 1 and 2 indicate that both foetus A and B displayed consistent and proportional growth across the assessed parameters (BPD, HC, AC, FL), with notable increases particularly evident by the 29th week. Fetal weights corresponded to the increasing gestational metrics, suggesting healthy fetal development under the integrated treatment regimen. The administration of ayurvedic medicine in conjunction with conventional prenatal supplements supported fetal growth despite the complexities of a molar pregnancy compounded by cancer treatment.In the 15th-week early second trimester scan of a twin pregnancy with a unified placenta on the posterior wall, a transabdominal ultrasound assessed the twins. Twin A, in a right lateral cephalic position, and Twin B, in a left lateral breech position, both showed normal fetal movements. Twin A matched the 14+5-week gestational mark with normal amniotic fluid levels at an AF-

DVP of 2.74 cm, while Twin B was slightly younger at 14+3 weeks with an AF-DVP of 3.02 cm. The screening revealed no major chromosomal abnormalities or soft markers for either twin, although the examination quality was suboptimal and the genitalia remained unidentified. This scan provided reassuring results for both fetuses at this stage.At the 18th week Doppler examination, both fetuses were assessed and found to be viable within a mono-chorionic diamniotic (MCDA) chorionicity. The placenta, positioned at the posterior wall and graded as level 1, displayed no signs of previa and was otherwise unremarkable. Twin A, in a left lateral lower cephalic position at 18+4 weeks, weighed 250 grams, with MCA PSV of 23.48 cm/sec, Umbilical artery PI of 1.48, and CPR of 0.9. Twin B, right lateral upper cephalic at 19 weeks, weighed 272 grams, with MCA PSV of 16.91 cm/sec, Umbilical artery PI of 1.30, and CPR of 1.0. These findings emphasize the need for regular monitoring to ensure the health and development of both twins. During the 25th week of pregnancy, the growth monitoring of the twins showed distinct progress. Twin A was in a left breech, cephalic position and measured at a gestational age of 25+3 weeks according to fetal biometry. The estimated fetal weight (EFW) for Twin A was 848 grams. Doppler measurements indicated that the Middle Cerebral Artery (MCA) Peak Systolic Velocity (PSV) was 36.64 cm/sec, with a Pulsatility Index (PI) of 1.45. The Umbilical artery PI stood at 1.13, and the Cerebroplacental Ratio (CPR) was 1.3, suggesting healthy fetal circulation and development. Twin B, positioned in a right cephalic orientation, was slightly behind with a gestational age of 25+2 weeks. The EFW for Twin B was 818 grams. The MCA PSV measured at 25.37 cm/sec, with a PI of 1.69, which is slightly higher compared to Twin A. The Umbilical artery PI was also higher at 1.40, with a CPR of 1.2. These metrics highlight the unique developmental paths of each twin, underlining the need for continued close monitoring to ensure optimal outcomes for both.At the 29th week of gestation, both fetuses exhibited healthy growth patterns, continuing to thrive while sharing a single placenta that displayed normal characteristics. Twin A, in a left lateral, cephalic position, followed a normal growth trajectory, falling within the 29th percentile by WHO standards and weighing 1359 grams. Notably, Twin A's Middle Cerebral Artery (MCA) Peak Systolic Velocity (PSV) was high at 40.54 cm/sec, with a Pulsatility Index (PI) of 2.19, a low Umbilical artery PI of 0.87, and an impressively high Cerebroplacental Ratio (CPR) of 2.5. Twin B, positioned in a right upper, cephalic presentation, demonstrated similar growth, with an estimated fetal weight close to that of Twin A. Twin B's MCA PSV measured 39.71 cm/sec with a PI of 1.00, an Umbilical artery PI of 0.79, and a CPR of 2.3, indicating robust fetal health and development for both twins.In a study by (Pal ,2021) [6] suggested that Ayurveda, the traditional Indian medical system, focuses on maintaining the balance of three essential bodily energies or doshas—Vata, Pitta, and Kapha—to promote health and well-being. In the context of pregnancy and conception, balancing these doshas is considered vital for the health of the mother and the development of the fetus. Ayurvedic remedies such as Ghee, Leptaden, aloe, dhatreelauha are commonly prescribed due to their beneficial properties that help stabilize the Vata and Pitta doshas, which play a significant role during pregnancy. Furthermore, in a case study patient (Roy et al.,2023) [7] and his family chose Ayurvedic treatment over methotrexate, following informed consent. Despite advice against sexual activity, contraception was initiated using a low-dose OCP, Ovuloc LD, due to the patient's persistent elevated beta-HCG levels post-D & C. Further surgical intervention did not reduce the HCG levels, leading to the adoption of an Ayurvedic approach, which identified the condition as resembling Raktaja gulma , aloe compound, Dec sukumaram and Phalasarpis with a predominance of Pitta, alongside Vata and Kapha doshas.

Similarly study by (Choudhary et al.,2020) [8] suggests that ghee is highly revered in Ayurvedic medicine for its nourishing and cooling properties, making it an excellent remedy for balancing both Vata and Pitta. This is particularly beneficial in pregnancy, where increased Vata can lead to dryness and instability. Ghee is also believed to enhance the digestive fire (Agni) without aggravating Pitta, supporting proper nutrition and energy balance which are critical during pregnancy. Another study by Ismail et al. (2021) [4] reported that Leptaden, a herbal supplement featuring key ingredients such as Jivanti and Shatavari, is designed to improve reproductive health and aid conception. This supplement not only facilitates conception but also contributes to sustaining a healthy pregnancy by nourishing reproductive tissues, enhancing fertility, regulating menstrual cycles, and supporting ovulation.Another case study conducted by (Nandkishor,,2021)[9] suggest the efficacy of Ayurvedic treatments, including Tab aloes compound and Tab. Leptaden, in managing unexplained secondary infertility. After three years of unsuccessful attempts to conceive and a reluctance to undergo standard diagnostic tests, the subject began Ayurvedic treatment combined with Panchkarma. Four months later, she successfully conceived, demonstrating the potential of Ayurvedic interventions to enhance fertility by mitigating stress and oxidative damage.Whereas in a clinical trial by (Kumar et al.,2017)[10] suggest that Aloe compound used for cooling and healing properties, making it beneficial for Pitta-related issues during pregnancy. In the context of molar pregnancy, use of Aloe vera as a laxative during pregnancy may pose potential teratogenic and toxicological effects on the embryo and fetus However, it is crucial to use this compound under medical supervision during pregnancy due to its potent effects.

Conclusion: An integrated approach combining Ayurveda and conventional medicine in managing molar pregnancy has been shown to effectively support healthy fetal development, as results depicts 29 weeks of positive growth metrics for both fetuses. Despite the initial unstable and concerning hCG levels and the complexities introduced by the patient's cancer treatment, the fetal development parameters—including (BPD), (HC), (AC), and (FW)—consistently progressed within normal ranges. Further, the careful monitoring through Doppler measurements provided timely insights into the vascular health of the fetuses, which is crucial in high-risk pregnancies. However, further research and more extensive case studies are needed to fully understand the efficacy and safety of Ayurvedic treatments in such complex scenarios and to establish standardized protocols for their use in molar pregnancy management.

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