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Case Report

Early termination of pregnancy in AVN Hip: A unique case

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ABSTRACT

Early termination of pregnancy (ETP) is a common procedure, with surgical intervention being the prevailing method. However, it carries inherent risks. This case report describes a 27-year-old woman with a history of left hip surgery who sought pregnancy termination. Due to her limited hip abduction, positioning her for surgery posed challenges. The patient underwent dilatation and curettage after cervical preparation with misoprostol and vaginal chlorhexidine solution. The procedure was modified to accommodate her hip limitations, using a straight table without conventional leg holders or stirrups. Successful pregnancy elimination was confirmed, and the patient remained uneventful during follow-up. This case report highlights the need for alternative approaches for ETP in patients with hip ailments. The modified procedure offers advantages such as simplicity, reduced equipment requirements, easy post-anesthesia positioning, and avoidance of common peroneal nerve palsy. Further research is warranted to validate these findings and extend them to a broader patient population, potentially improving safety and effectiveness in surgical interventions for this specific group.

1. Introduction

Terminating a pregnancy in its early stages, known as early termination of pregnancy (ETP), is a procedure that is frequently carried out. It is estimated that around 15% of clinically recognized pregnancies result in early pregnancy failure.[1] In countries with low contraceptive usage, unwanted pregnancies often lead to the decision of terminating the pregnancy. In the case of India, the legal framework allows for the termination of unwanted pregnancies until the completion of the 12th week of gestation. Historically, surgical intervention has been the primary method employed for the early termination of pregnancy (ETP). Nevertheless, it is essential to acknowledge that this approach carries inherent risks, including complications such as uterine perforation, hemorrhage, and the retention of products of conception (RPOC).[2] While the use of misoprostol for managing early termination of pregnancy (ETP) has emerged as an alternative to surgical intervention in numerous countries, surgical methods like dilatation and curettage remain the predominant approach for ETP with management.

This case report presents a clinical scenario involving a 27-year-old female patient who visited our outpatient department (OPD) with a history of left hip surgery and missed menstrual period. The patient expressed the need for the removal of products of conception but was experiencing difficulty in abducting her left hip.

2. Case Presentation

A 27-year-old woman, (G2P1), presented to the outpatient department (OPD) after missing her menstrual period at 8 weeks of gestation. The pregnancy was unplanned, and the

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patient had taken a misoprostol tablet under the supervision of her family doctor to induce pregnancy termination. The patient had uneventful previous pregnancy. Her medical history was unremarkable, with no previous instances of preterm births, gestational diabetes or hypertension or complications during labor. A thorough diagnostic assessment was performed, encompassing blood tests and a urine pregnancy test. The ultrasound examination validated the existence of retained products of pregnancy within the uterus, while the cervix appeared closed with a length of 2.5 cm. (Figure 1)

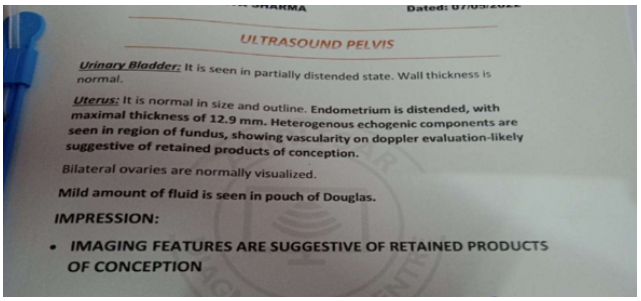
The X-ray of the left hip joint exhibited signs of avascular necrosis affecting the head of the femur. (Figure 2) Furthermore, the image revealed the presence of cannulated screws utilized for the fixation of a previous left hip femoral neck fracture. This surgical intervention was performed around five years ago subsequent to the patient's diagnosis of a femoral neck fracture resulting from a fall from a bike.

The patient was posted for the dilatation and curettage after her consent for the procedure. For cervical preparation, the standard approach involved the vaginal administration of a prostaglandin analog, namely misoprostol, on the same day about four hours prior to the procedure. Misoprostol is recognized as a safe and effective medication for preparing the cervix.[3–5]

To mitigate the potential occurrence of post-abortion infection, we implemented vaginal preparation utilizing a chlorhexidine solution.[6] In the case of pregnant patients, preoperative administration of antibiotics has shown efficacy in reducing the risk of post-abortion infection. Consequently, as a prophylactic measure, a single dose of doxycycline was administered.[7] Due to the patient's inability to abduct her left limb, we encountered challenges in positioning her in the lithotomy position using the conventional leg holder. Consequently, we made adjustments to the patient's position, opting for position without the use of a holder or stirrups. We placed a side support and the bump under her feet and buttocks to perform the surgery. (Figures 3 and 4)

During the procedure, cervical dilation was initiated under sedation with propofol using the smallest Hegar dilator capable of accommodating the cervix. Subsequently, the dilator size was incrementally increased, ensuring passage through both the external and internal os of the cervix. Recognizing the landmark was facilitated by the noticeable decrease in resistance under gentle pressure. To stabilize the uterus and minimize the risk of perforation, a tenaculum is employed to grip the anterior lip of the cervix. With the non-dominant hand, traction is applied in a direction towards the introitus, effectively reducing the cervicouterine angle and facilitating the procedure. Following the completion of the procedure, the presence of a gritty texture confirmed the successful elimination of the pregnancy. The tissue was sent for histopathological examination.

Patient was followed up with ultrasound abdomen which showed no retained products and remained uneventful.


ULTRASOUND PELVIS

Urinary Bladder: It is seen in partially distended state. Wall thickness is normal.

Uterus: It is normal in size and outline. Endometrium is distended, with maximal thickness of 12.9 mm. Heterogenous echogenic components are seen in region of fundus, showing vascularity on doppler evaluation-likely suggestive of retained products of conception.

Bilateral ovaries are normally visualized.

Mild amount of fluid is seen in pouch of Douglas.

IMPRESSION:

- IMAGING FEATURES ARE SUGGESTIVE OF RETAINED PRODUCTS OF CONCEPTION

Fig. 1: Showing the ultrasound report of the patient

Fig. 2: X-ray showing the avascular necrosis of the left femoral head and fixation withcancellous screws

3. Discussion

AVN can arise in a significant proportion of femoral neck and head fractures (15-50%) and hip dislocations (10-25%), even with internal fixation in young patients similar to our case.[8,9]

In 1970, Currey brought attention to the challenges faced by hip osteoarthritis (OA) patients in relation to their physical activity. Currey conducted a retrospective study involving 121 relatively young patients (≤60 years old) diagnosed with hip OA and found that a significant proportion, approximately two-thirds, reported difficulties in engaging in various activities including sexual activities

Fig. 3: Showing the modified position for dilatation and curettage of the patient from right side

Fig. 4: Showing the modified position for dilatation and curettage of the patient from left side

Fig. 5: Showing the modified position for dilatation and curettage of the patient from front

due to difficulty in abduction of the affected limb. They also found that a considerable portion of the participants (25%) identified sexual difficulties as a definite source of marital dissatisfaction. These challenges were more commonly reported by women and attributed to hip pain and stiffness rather than a decrease in overall libido.[10] Loss of abduction posed a significant challenge for obtaining lithotomy position in our case.[9] The challenge was to navigate the risk of re- fracture during the procedure as excessive force for the lithotomy position using the straps in the conventional manner would have been detrimental due to restricted range of motion.

As far as our understanding goes, there is no existing documentation of a case report that specifically addresses the modification of lithotomy position described above. Despite conducting a thorough search on Pubmed, we were unable to find any literature pertaining to this particular subject.

Our modification offers several advantages over the traditional method of performing dilatation and curettage in patients with hip fractures using lithotomy stands. Firstly, our approach eliminates the need for additional stands and strapping, simplifying the setup and reducing equipment requirements. Additionally, maintaining the patient's position after anesthesia is effortless with our modification, compared to the use of lithotomy poles. Conversely, shifting the patient from the additional straps and stand post-procedure is burdensome with the traditional approach.

Moreover, patients with limited abduction, such as those who have undergone hip fractures, hip replacement, or other underlying hip pathology, cannot utilize the traditional approach. Our modification addresses this issue by offering a more flexible alternative that can accommodate patients with hip limitations.

It is important to note that these advantages are based on a single patient case report, and the findings cannot be generalized to all patients. Further research and larger studies are necessary to validate the benefits of performing dilatation and curettage using the straight table in patients with hip fractures, as opposed to the traditional lithotomy stands. Another significant advantage over traditional lithotomy stands in dilatation and curettage is the elimination of the risk of common peroneal palsy. Common peroneal palsy can occur due to the pressure exerted on the common peroneal nerve by the supports attached to the knee in the traditional approach. Unlike the knee supports in the traditional approach, our method avoids pressure on the common peroneal nerve.

Although using medicine for the expulsion of the products of conception in a patient similar to our case may be an option. The patient had already attempted the termination once using misoprostol, deterred us from using it again. As in a previous study conducted by Davis et al.

in 2004, the bleeding patterns of 80 women who received a vaginal misoprostol dose of 800 μg were examined. The study revealed that following the administration of misoprostol, patients reported experiencing bleeding or spotting on a daily basis for a duration of 14 days.[11] Hence, in resource-limited settings such as India, the surgical approach is favored for the evacuation of products of conception due to its shorter hospital stay.

4. Conclusion

In conclusion, the modification proposed in our study holds substantial promise for the surgical evacuation of pregnancy in patients with hip ailments. The avoidance of common peroneal nerve palsy and the ease of patient shifting pre- and post-surgery underscore the clinical significance of our approach. Further research is warranted to validate and extend our findings to a broader patient population. Implementing this modified procedure has the potential to greatly enhance the safety and effectiveness of surgical interventions in this specific patient group, leading to improved outcomes and patient satisfaction.

5. Conflict of Interest

None.

6. Source of Funding

None.

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