Case Report

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Bladder stone: a rare cause of obstructed labour

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ABSTRACT

Bladder stone is a rare cause of obstructed labour. Study report a case of bladder stone obstructing the labour in a multipara. Diagnosis was made during labour on pervaginal examination. The stone was impacted below the fetal head thus obstructing labour. A bladder stone weighing approximately 120 g and measuring 6x6 cm was removed by cystolithotomy at the time of caesarean section. The postoperative period was uneventful. Mechanical cause resulting in obstructed labour is a very common phenomenon but vesical calculus causing dystocia is very rare and till date very few cases of vesical calculus resulting in obstructed labour has been reported in the literature. Prompt diagnosis of the condition is very important to prevent grave complications like vesicovaginal fistula and rupture uterus.

Keywords: Rupture uterus, Vesical calculus, Vesicovaginal fistula

INTRODUCTION

Giant Vesical calculus (more than 100 grams) is a very rare cause of obstructed labour out of the various other causes causing mechanical obstruction and till date only few cases has been reported in the literature.¹ Prompt diagnosis and timely intervention is very important to prevent complications like vesicovaginal fistulae and rupture uterus.² Here we report a case of bladder stone causing obstructed labour in a multipara where the diagnosis was made during labour by pervaginal examination.

METHODS

A 35 years old woman second gravida with previous full term vaginal delivery was admitted with labour pains at 42 weeks and had a PROM of about 13 hours she was referred from primary health center as a case of bladder stone. There was no present or past history of urinary complaints. Her general physical examination was normal. The abdominal examination revealed a full-term uterus with longitudal lie and cephalic presentation. Her bladder was distended up to umbilicus and head was palpable above the pelvic brim. Her fetal heart was 110 per minute and had good uterine contractions. The vaginal examination revealed a hard mass of approximately 5x5 cms palpable through the anterior vaginal wall.



Figure 1: Intraoperative removal of vesical calculus by cystolithotomy.



Figure 2: Removed vesical calculi of size 6x6 cm.



Figure 3: Bladder sutured after removal of calculus.



Figure 4: Puerperal uterus in relation to the bladder.

Her cervix was fully dilated and vertex was at -5 stations, membranes were absent and liquor was thick meconium stained and pelvis was adequate. Bladder catheterization with a Foleys catheter was tried but could not be negotiated. She was immediately shifted for emergency LSCS in view of obstructed labour. A female baby of weight 2.6 kg was delivered. The bladder catheterization was done with Foleys catheter. The simultaneous cystolithotomy (Figure 1) was performed and a large calcium stone measuring 6x6 cm was removed weighing 120 gms (Figure 1). The bladder was repaired in two layers (Figure 3 and 4). Post operatively the patient was put on higher antibiotics and her recovery period was uneventful. She had received antibiotics and urine c/s showed no significant bactiurea. Her catheter was removed after 21 postop day and was discharged on 22 days.

DISCUSSION

Out of the various causes of obstructed labour vesical calculus is a very rare cause.¹ The incidence being 1 in 2000-3300 pregnancies.³ The incidence of bladder stone in developed countries has been decreasing since 19th century due to improved nutrition and infection control.⁴ Available evidence shows that 5% of all the urinary stones are found in urinary bladder and approximately 5% of all bladder stones occur in women.⁴ Congenital and acquired diverticula of the urinary bladder may be the reason for the stasis and development of calculus.⁵ During pregnancy it may be associated with infection, abortions, premature delivery, urinary fistula and rarely dystocia of labour.² Bladder stone is usually associated with irritating symptoms such as dysuria, pain, incontinence, urinary urgency and frequency. However, if the bladder stone don't obstruct the bladder inflow or outflow, it may remain asymptomatic and become several centimeters in size which is found incidentally.⁶ There can be several episodes of urinary tract infections in patients with vesical calculus in pregnancy. Persistent pyelonephritis despite appropriate and adequate antibiotic therapy should prompt the search for obstruction and stone in pregnancy.⁷

In this case the patient did not have any urinary complaints neither an ultrasonography was done and hence the condition was not diagnosed antenatally.

Bladder stone is diagnosed by X- ray and intravenous pyelogram which are not commonly performed during pregnancy. ultrasonography is prescribed but it can miss bladder stone in the second half of pregnancy due to interference of the fetal head.⁵

The management of bladder stone depends on the duration of gestational age. Although trans-vesical litholapexy is the preferred choice of treatment, open suprapubic cystotomy is indicated for removal of large vesical calculus.⁵ If it is asymptomatic and diagnosed during antenatal period, then cystolithotomy is preferred.⁸ Caesarean section with cystolithotomy is the procedure of choice. However, when it is diagnosed in early labour before the engagement of fetal head, vaginal delivery can be possible if the stone is pushed above the fetal head.⁸ If the stone is neglected then it can be trapped between the symphysis pubis and fetal head causing arrest of the fetal descent, dystocia of labor. In our case caesarean section with cystolithotomy was done as the patient had presented with prolonged labour and the stone was impacted below the fetal head resulting in obstructed labour.

CONCLUSION

If bladder stone is diagnosed during labour and is of the size large enough to cause dystocia, then patient should be taken for caesarean section along with cystolithotomy to minimize complications of bladder damage like vesicovaginal and vesicocutaneous fistula.

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