

Successful Term Pregnancy in a Second Trimester Female with Urosepsis: A Case Report

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ABSTRACT

Urolithiasis means calculus in urinary system. It is a rare condition in pregnancy which can have devastating results for the mother in the form of pyonephrosis and septicaemia and to the foetus in the form of IUGR and prematurity. This is a rare case report of a 27-year old female patient who presented with perinephric abscess and hydronephrosis at 22 weeks of pregnancy. With proper evaluation and management, pregnancy continued till term with good perinatal outcome.

Keywords: DJ stent, Perinephric abscess, Urolithiasis

CASE REPORT

A 27-year-old female had reported to Department of Obstetrics & Gynaecology at IKDRC, Ahmedabad, with 22 weeks of gestation presented with the complaints of high grade fever on and off associated with right sided flank pain for last six weeks. She was on symptomatic treatment. On examination she was running high grade fever (103.2°F) with pulse 94/min & BP 110/70mm of Hg. Per abdomen palpation- 20 weeks gravid uterus with external ballotment. Ill defined tender palpable lump in right lumbar region was present. Her blood investigations were haemoglobin 6.9 gm%, total count 15,800/mm³ with polymorphs 92 % (band form 13%) and S. creatinine 0.73mg/dl. Ultrasonography suggested right kidney 13.8x5.7cm having gross hydronephrosis with internal echos and multiple calculi in all calyces, 7.9x7.5cm right perinephric collection was present and single live foetus 22 weeks with reduced amniotic fluid index. After initial stabilisation, patient underwent USG guided right double J stenting (DJ) and right perinephric drain was placed for draining pus. Pus was sent for bacterial culture and drug sensitivity. Till then, wide spectrum antibiotics were administered initially for foetal and maternal well being. She was treated for oligohydroamnios with amino acids and hydrotherapy. She had given 3 units of packed cell volume on alternate days for treatment of anaemia. Fever subsided after three days, pus culture showed heavy growth of *Pseudomonas aeruginosa* which was sensitive to amikacin and piperacillin with tazobactam. Once perinephric drain output was nil and no USG evidence of perinephric collection, drain was removed. Intravenous antibiotics continued for 14 days. Patient was discharged after three weeks of hospital admission with right DJ in situ and 25 weeks single live foetus with normal amniotic fluid index. She was kept in close follow up with foetal monitoring. The pregnancy remained uneventful till 38th week of gestation. She delivered vaginally a full term healthy female child of 3.1 kg. Post partum period was uneventful and patient discharged on day 5. After three weeks, renal scan was done for definitive renal function assessment that came out with right kidney 3.68% function (ERPF 8.97ml/min). Right open nephrectomy done and patient was discharged on day 7 uneventfully.

DISCUSSION

Acute pyelonephritis is found to be the most common cause of maternal sepsis but urolithiasis with sepsis is a rare phenomenon [1]. Incidence of Urolithiasis in pregnancy ranges from 0.03-0.06%

[2]. Incidence of maternal sepsis has declined from 0.6% in 1979 to 0.3% in 2000. Though sepsis related mortality increased from 0.85 death/100,000 pregnant women in 2003-05 to 1.13 deaths/100,000 in 2006-08, that can be related to increased maternal age and maternal morbidity (Obesity, diabetes, hypertension) [3]. Maternal sepsis can result in maternal morbidity as organ dysfunction (Acute respiratory distress syndrome ARDS, acute renal failure ARF, myocardial or cerebral ischemia, disseminated intravascular coagulation DIC) or mortality. Foetal events can be preterm delivery, neonatal hypoxia, acidosis or sepsis and even foetal death [4]. Preterm delivery and perinatal mortality are common complication of sepsis. Preterm birth may occur due to premature rupture of membrane (7.0% v/s 2.9%) [5].

Symptomatic urolithiasis can vary from 1 in 244 to 1 in 1,240 pregnancies [2,5]. Patient usually presents with flank pain, dysuria, haematuria and/or fever. Urolithiasis in pregnancy can be managed conservatively. Invasive treatment is required in cases where pain is persistent, fever not responding to antibiotics, worsening renal function and features of sepsis. Urinary diversion can be done with double J stent or percutaneous nephrostomy placement under ultrasonographic guidance without risk of radiation [6]. Timely decompression of kidney will preserve renal function and help in controlling sepsis. Dovlatian et al., performed USG guided PCN during pregnancy that continued till delivery 83 women underwent PCN diversion for pyodestructive form of pyelonephritis in whom only 12 had ineffective drainage that ultimately required nephrectomy [7].

Apart from diversion, sepsis requires a goal directed therapy with resuscitation, haemodynamic management and antimicrobial therapy. At gestational ages which are compatible with potential for extrauterine neonatal survival, foetal and to codynamic monitoring is indicated. Uterine contractions, resulting from release of endotoxin respond well to hydration, though true preterm labour will require tocolytic therapy. Timing of delivery is determined considering gestational age, maternal and foetal status.

Definitive management for urolithiasis can be contemplated in second trimester or can be postponed till parturition, thus minimizing risk of spontaneous abortion during first trimester and avoiding danger of preterm labour with surgical intervention in third trimester [8]. Pregnancy outcome after non obstetrical surgeries carries a miscarriage rate of 5.8%, elective termination 1.3%, preterm labour 3.5%, preterm delivery 8.25% and foetal loss 2.5% [8].

CONCLUSION

Maternal urosepsis is a rare occurrence. Early recognition and intervention will result in recovery from sepsis and foetal well being. Patient can be managed with conservative treatment and placed under observation till delivery. Definitive management can be planned in post partum period to minimize risk of foetal loss.

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