INTRAUTERINE SACROCOCCYGEAL TERATOMA RUPTURE: A CASE REPORT

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Abstract **:**

Sacrococcygeal teratoma (SCT) is the most commonly found retroperitoneal benign tumor and mortality from SCT diagnosed before birth ranges from 25% to 37%. On this case report, mrs. S 35 years old was referred to Haji Adam Malik Medan General Hospital which is diagnosed with sacrococcygeal teratoma + polyhydramnios + MG + IUP (28-29) weeks + alive fetus and was planned to undergo amnioreduction and expectant management. During operation, it was found that amniotic fluid mixed with blood, and seen teratoma have been rupture intrauterine. The part of ruptured teratoma was sent to pathologic anatomy laboratory. 1 day later the baby deceased due to ARDS and sepsis.

Keywords : Intrauterine, Sacrococcygeal Teratome, Rupture, Pregnancy.

I. INTRODUCTION

Sacrococcygeal teratoma (SCT) is the most commonly found retroperitoneal benign tumor.[1] SCT is believed to originate from pluripotent cells in the Hensen nodule, which is located on the anterior surface of the sacrum or coccyx bone.[2] SCT is more common in girls than boys . The ratio of female to male 3:1 to 4:1. The etiology is unknown. SCT consists of two or three layers of germinal cells so that it forms from several types of tissue.[3]

SCT diagnosed at post-natal have a good prognosis but mortality from SCT diagnosed before birth ranges from 25% to 37%. Modern technology using three-dimensional (3D) sonography now allows prenatal diagnosis of SCT even in the first trimester.[4] Early diagnosis of SCT can be found through ultrasound examination that is a cystic, dense, or mixed mass formed from the sacral area and protruding toward the perineum or buttocks. However, SCT can be mistakenly diagnosed as anterior sacral meningomyelocele, especially when it is found as a posterior cystic mass.[5]

Death occurs mainly in fetuses with teratomas that grow rapidly, densely and are highly vaccinated so that they can cause high-output heart failure.[6] High-output heart failure is a consequence of the phenomenon of 'blood entry theft' by tumors, which act as large arteriovenous malformations. This heart failure causes polyhydramnios, hydrops, intrauterine fetal death, and preterm birth. Assessment of tumor size, growth rate, and fetal heart function allows identification of fetuses at risk of decompensation[7]

When fetal heart failure occurs after viability, early termination of pregnancy and surgery after birth may be the best choice to avoid uterine death. The survival rate with this strategy approach reaches 50%.[7] Before viability, intrauterine fetal death almost always occurs when hydrops occured. In addition, hydrops can cause a 'maternal mirror syndrome' that threatens the life of the mother. Intrauterine fetal surgery for tumor resection has been suggested as a potential therapy to prevent fetal death in the womb[8]

Although intrauterine fetal surgery increases survival, this is at risk to the fetus and mother such as premature rupture of the membranes, premature birth, uterine scarring and bleeding.[9]

II. CASE REPORT

Mrs. S, 35 years old, G4P2A1 was referred to Haji Adam Malik Medan General Hospital with diagnosis of fetal sacrococcygeal teratoma + polyhydramnios + MG + IUP (28-29) weeks + alive fetus. General conditions and vital signs of the mother within normal limits. Obstetric physical examination found a high uterine fundus of 32 cm which exceeded the estimated fundal height of the uterus from the gestational age that should be. Lab tests such as routine blood, electrolytes, kidney function, routine liver and urine function are within normal limits. Ultrasound examination revealed fetal biometry appropriate to gestational age. A hyper-hypoechoic picture was obtained with a clear impression that a cystic-solid mass measuring 13x 12 x 8 cm at posterior of the coccyx (figure 1). The MVP measurement found 12.2 cm of polyhydramnios impression (figure 2). MCA PSV measured 32,58 which is 0,88 MoM. Patient was planned to undergo

amnioreduction and expectant management. Amnioreduction was performed as much as 750 cc and the result of amniotic fluid analysis: brown color; total protein: 1.3 g / dl; LDH 1226 U / L, Glucose 16 mg / dl, pH 8. The next 5 days after amnioredution, the patient comes to the emergency room with rupture of membranes with a reddish color, then decided to perform immediate cesarean section. During operation, it was found that amniotic fluid mixed with blood, and seen teratoma have been rupture intrauterine. Born a baby girl with BW 2370 gr (include tumor mass) BL 44 cm A/S 5/6 Anus (+) with sacrococcygeal teratoma had ruptured (figure 3). The part of ruptured teratoma was sent to pathologic anatomy laboratory. 1 day later the baby deceased due to ARDS and sepsis.

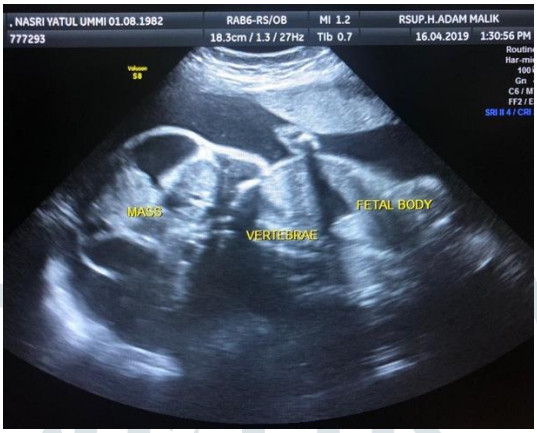

Figure 1. Solid-cystic mass on the posterior coccyxus

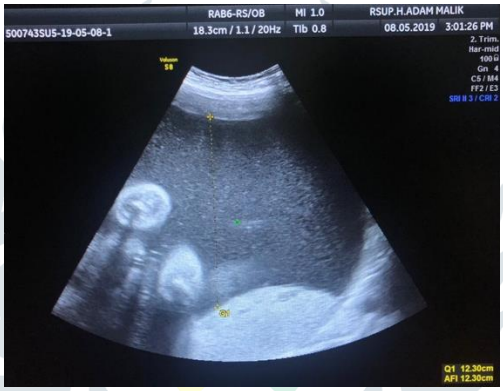

Figure 2. Most vertical pocket 12.3 cm with polyhydramnios impression

Figure 3. Coccygeal mass of a ruptured teratoma in a newborn

III. DISCUSSIONS

Diagnosing prenatal of sacrococcygeal teratoma is very important, because large tumors can cause congestive heart failure, hydrops, and high perinatal mortality. Histopathological results and their correlation to the potential for malignancy are important factors in decision making, such as deciding to terminate pregnancy in countries where this is possible. However, prenatal ultrasound has not been able to conduct a potential examination of malignancy in SCT. Although most SCT is a benign tumor, 10% has the potential to become malignant.[10]

SCT can be diagnosed since the second trimester of pregnancy when there is polyhydramnios and/ or uterus that is greater than gestational age. Prenatal diagnosis is important because early prenatal presentation is is a relatively good prognostic indicator for fetal survival while diaagnosis after 30 weeks associated with high fetal morbidity and mortality.[11]

Monitoring fetal distress during pregnancy is also very important. Some large tumors have very high blood flow which causes a shift in blood flow away from the baby toward the tumor. When that happen it can cause the baby to become deficient in blood supply and hydrops which indicates the heart starts to fail and the baby becomes swollen. Other possible complications include bleeding inside the tumor, distention due to excess amniotic fluid and preterm labor.[12]

Progressive hydrops can be associated with a swollen placenta that does not function properly. There is a rare condition called "Maternal Mirror Syndrome", where the mother reflects the baby's disease. This is due to fluid retention in the fetal compartment, water retention in the mother also occurs and she suffers from the same symptoms as the sick fetus. Mothers will become sick and have signs of preeclampsia, water retention, high blood pressure, protein in urine, placentomegaly, and heart failure. If this happens, the baby must be born immediately because it is a maternal emergency.[13]

In this case there have been no signs of decompensation in the fetus and maternal syndrome, it was decided to do amnioreduction with the aim of reducing discomfort in the mother because the urge from the uterus is too large, preventing early labor due to distension and preventing rupture of the tumor during labor.[14]

After an amniotic reduction of 750 cc, and with no significant findings on the analysis of amniotic fluid. Patients are allowed to go home with conservative treatment goals until their age is as possible to terminate. However, the patient comes with reddish ruptured membranes, suggestive of mixed with blood from a ruptured period of teratoma. At duration surgery the results that have been estimated are indeed obtained. Teratoma mass> 5 cm is at risk for rupture, and teratoma rupture is fetomaternal disruption, so pregnancy termination is carried out by emergency cesarean section.[15]

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