Multicystic Higroma Colli: Case Report

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Abstract
Introduction: Cystic hygroma is a congenital disorder in the form of a cyst filled with lymphatic fluid arising from abnormalities in the embryonic development of the lymphatic system. Cystic Hygroma typically manifests in the neck area (75-90%) with; 20% in the axillae, 5% in the mediastinum, retroperitoneal region, and can also be in the thoracic wall. Cystic hygromas are often associated with chromosomal aberrations such as Trisomy syndrome; 21, 18, and 13, and Turner syndrome (45, X0). It can also be associated with cardiac anomalies and nonimmune hydrops fetalis. Cystic hygromas can usually be seen on sonographic examinations during the first trimester. Generally, these lesions are associated with a poor prognosis, especially if there is an abnormal karyotype. Reported a case of cystic hygroma colli in a woman who was pregnant at 18 weeks' gestation. In this case, termination of pregnancy was performed at 22 weeks of gestation. Fetuses with cystic hygromas have a high risk of poor outcomes. Therefore, once the diagnosis has been established, it is necessary to consider terminating the pregnancy. This case report demonstrates the importance of routine pregnancy evaluation. Finding the exact cause also needs to be done to avoid recurring events in subsequent pregnancies.
Keywords*: Cystic hygroma, Higroma colli cyst, and termination of pregnancy.*

I. INTRODUCTION

Cystic hygroma is a congenital lymphatic system malformation characterized by aberrant fluid accumulation[1]. The overall incidence of cystic hygroma is estimated to range from 1 in 1,000 to 1 in 6,000 live births and approximately 1 in 750 spontaneous abortions[2]. While cystic hygromas can occur at multiple sites, approximately 75% arise in the cervical region, 20% in the axilla, and the remainder in the retroperitoneum, limbs/bone, and mediastinum[3]. Lesions predominantly occur in the posterior triangle of the neck, where enlargement poses a risk to nearby vital structures: the sympathetic chain, carotid sheath contents, and branches of the hypoglossal, lingual, and facial nerves[4]. Cystic hygroma is frequently linked with underlying chromosomal abnormalities, with reports suggesting that between half and four-fifths of cases are associated with aneuploidies. The most observed conditions include Turner syndrome (45,X) as well as trisomies 21, 18, and 13[5]. This condition is usually diagnosed on ultrasound, where an increased nuchal translucency (NT) is seen between the fetal skin and the subcutaneous tissue along the neck and cervical spine[6]. Cysts in hygromas grow slowly and rarely manifest. According to reports, isolated big cystic hygromas can block breathing, leading to the need for tracheal intubation and tracheostomy after birth[1]. The prognosis for these lesions is often bad, especially when a normal karyotype is missing[7]. One of the most severe complications of cystic hygroma is hydrops fetalis, which is associated with an almost 100% mortality in many reported series[8]. This case report aims to offer knowledge regarding the identification and treatment of multicystic instances of Higroma colli in early pregnancy.

II. METHOD

Case report research design describes patient case issues that are deemed to have scientific relevance. Regarding multicistic hygroma colli instances, there were two cases. The first case was a primigravida who was 23 years old and had an 18-week gestational age (GA). During routine prenatal care (ANC), an ultrasound exam revealed a colli hygroma. A fetomaternal ultrasound should be performed on the patient to confirm the colli hygroma diagnosis.

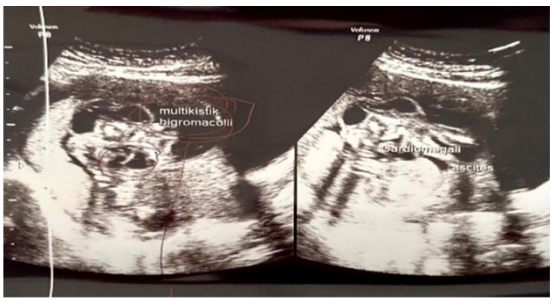

Figure 1. Fetomaternal ultrasound at 19+4 weeks of gestasional age
A single fetus, fetal heart rate +, fetal movement +, two cystic figures with cardiomegaly in the fetal neck region, and an image of ascites on the chest wall are all depicted on the image.

At 19 weeks gestation, the patient received a fetomaternal ultrasound examination, and a multicystic hygroma with fetal cardiomegaly was identified. The pregnancy should be ended, according to the advice. Repeated ultrasonography performed on the patient at 22 weeks revealed the same abnormalities, including multicystic hygroma colli, cardiomegaly, and oligohydramnios. The pregnancy was ended at 22 weeks gestation with the family's approval after they were made aware of the dangers of carrying it to terms. The pregnancy is ended vaginally because the fetus' size still matches that of the mother's pelvis. A balloon catheter was inserted after each of the four induction procedures. Twelve hours after inserting the catheter, a baby boy with a body weight of 320 grams and a length of 25 cm died. During fetal inspection, a cystic formation behind the left neck was found.

Fig 1. *Fetomaternal ultrasound at 19+4 weeks of gestasional age*

There is no family history of specific illnesses or congenital anomalies. No prior intermarried relationships or Rh-negative pregnancies existed. The patient has never had a chromosomal analysis amniocentesis.

The second case included a G3P2A0 who was 14 weeks pregnant and worried about vaginal spotting. The first and second children were born through caesarean section due to prior labor. The 10-week ultrasound showed that everything was good in terms of gestational age. denied using any medications prior to prenatal vitamins, denying history of major illness, and denying history of severe morning sickness and vomiting in the early stages of pregnancy. Vital signs were within normal ranges, and the fundus of the uterus could be felt between the symphysis pubis and the umbilicus. A

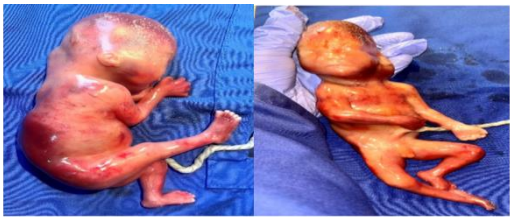

Figure 2. The image depicts a newborn in the Left Lateral Decubitus posture with a cystic hygroma that runs from the left neck to the back

Fig 2. *Fetomaternal ultrasound at 19+4 weeks of gestasional age*

single fetus, fetal heart rate -, breech presentation, and a lobular hypoechoic cystic mass in the head and neck region were all discovered by ultrasonography. Additionally, the patient was given an abortion by dilating the balloon catheter with 10IU oxytocin dissolved in 500 ml Ringer lactat at a rate of 20–40 tpm/min. After a 24-hour induction, the baby's sex was unknown, he died, weighed 150 grams, and had several cystic characteristics of fetal hygroma coli. The patient's mother and family declined to have chromosomal or other examinations performed on the baby's body.

III. RESULT AND DISCUSSION

Cystic hygroma represents a congenital malformation of the lymphatic system, characterized by the development of multiloculated fluid-filled spaces. Although the cervical region is the predominant site, lesions may also extend to the mediastinum, abdomen, and axilla[2]. The pathogenesis of cystic hygroma involves disruption of normal lymphatic venous communication, producing fluid-filled cavities beneath the fetal skin. This malformation reflects the incomplete maturation of the lymphatic system, which is still developing around the fifth week of pregnancy[9]. Isolated large cystic

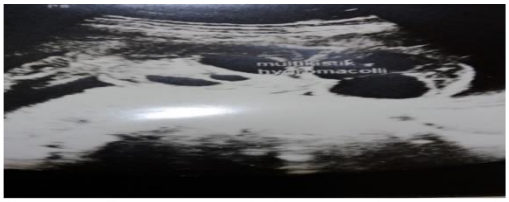

Figure 3. Fetomaternal ultrasound at 14 weeks of gestasional age

hygromas have been reported to obstruct breathing, eventually requiring tracheal intubation and tracheostomy after birth[1], [10]. The risk of infant death is increased by incompetence of the fetus in ventilation and feeding difficulties. In general, these lesions have a poor prognosis, especially in the absence of a normal karyotype[7]. When detected during pregnancy, cystic hygroma often indicates a higher likelihood of fetal structural anomalies most notably affecting cardiac structures and carries a potential risk of progression to hydrops fetalis[10].

Based on ultrasound examinations conducted as part of standard antenatal care and reinforced by fetomaternal ultrasound, two cases of multicystic hygroma colli discovered at 14 and 18 weeks of gestation have been documented. Due to their rarity, such situations are interesting to examine. Dari pemeriksaan ultrasonografi, dapat ditemukan akumulasi cairan pada intradermal dengan dinding tipis atau dengan multi septa[3]. Prenatal ultrasound juga dapat menunjukan peningkatan nuchal thickness (≧ 3mm)[11]. According to the existing literature, a cystic hygroma can be discovered on first trimester ultrasonography [6]. Despite the fact that it has been discovered as early as 12 weeks of gestation, the usual age of diagnosis is around 19 weeks. It was discovered during a routine ultrasound at 14 and 18 weeks of gestation in this case. At 10 weeks of gestation, abdominal ultrasonography can detect cystic hygromas, while transvaginal ultrasonography offers more detail[12].

As soon as a fetal abnormality was suspected in these 2 cases, the patients were referred to the fetomaternal department. There, the diagnoses of multicystic hygroma colli, cardiomegaly, and oligohydramnios were successfully made, along with a recommendation for termination because the fetus had a fatal anomaly. This is in line with the literature, which advises that if a cystic hygroma is discovered, it should be sent right away for examination by a fetomaternal expert because some circumstances may qualify as prenatal medical emergencies, especially after 16 to 18 weeks of gestation. The decision to end a pregnancy must be explained to the family[13]. If the fetus is little and the gestational age is still early, a cesarean section is not necessary to end the pregnancy; it can be done vaginally through induction. Early antenatal diagnosis and sufficient treatment are required due to the financial and emotional cost of caring for a child with a cystic hygroma. Recognizing chromosomal abnormalities at an early stage is important, since they often influence the clinical course and may progress toward hydrops fetalis[14]. The mother's prognosis improves with earlier diagnosis and treatment[6], [15]. In these situations, pregnancies were aborted. At 22 weeks of gestation in the first case and 14 weeks in the second. The family was advised of the hazards of continuing the pregnancy and gave approval for the pregnancy to be ended vaginally by induction.

IV. CONCLUSION

Cystic hygromas in fetuses frequently result in poor outcomes. As a result, it is crucial to think about ending the pregnancy as soon as the diagnosis is made. This case study emphasizes the value of routine ultrasonography pregnancy screening. Fetomaternal ultrasound should be performed if you discover anomalies in the fetus, especially in the early stage of pregnancy, to enable earlier diagnosis and treatment. The root reason needs to be identified in order to prevent recurrent incidences in subsequent pregnancies.

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