Incidental Prenatal Diagnosis of Congenital Inguinal Hernia: Case Report.

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Abstract
Prenatal Congenital inguinal hernia is an extremely rare case to be presented in medical practice, prenatal diagnosis is tricky, vague and could be indefinite. Therefore, an expert fetal medicine specialist is highly recommended to point out for the accurate diagnosis as it may be misleading with urogenital tumor. We report a rare case of a child with Prenatal Congenital Inguinal Hernia that was incidentally diagnosed during the routine obstetric prenatal care. This case highlights the significance of the careful evaluation of prenatal ultrasonographic investigation during pregnancy and specially on the imaging features that point out the diagnosis toward inguinal hernia and exclude other diagnosis.

Categories: Pediatrics, Obstetrics/Gynecology
Keywords: prenatal ultrasound, prenatal diagnose, general obstetrics, obstetrics & gynecology, gynaecology and obstetrics

Introduction
As known, the tunica vaginalis arises from the peritoneum then migrates and moves downward into the scrotum with the testicles in utero. Normally, the inguinal canal stays open during pregnancy and eventually closes after delivery at birth, once it does not close and the process vaginalis persist, some intestinal loop will be compelled to get in the inguinal canal due to increasing intra-abdominal pressure resulting in hernia formation.

The most common defect in the abdominal wall in infants and children is indirect inguinal hernia [1]. In spite of the fact that congenital inguinal hernia is relatively common to be found in pediatrics, it is quite so rare to be presented and diagnosed prenatally during prenatal care.

Prenatal congenital inguinal hernia is an extremely a rare, exceptional and interesting entity. Sixteen antenatal diagnosed cases have been reported in English literature from 1991 to 2016 [2].

Case Presentation
A 44 - years old lady, G8P7A0, at 36 weeks 1 days of Gestation, with well-controlled Gestational diabetes as well, was diagnosed incidentally during antenatal care at the outpatient clinic of our hospital.

Her antenatal History was significant for abnormal first trimester screening tests for Down syndrome; as she had 1:5 risk on combined screening. Subsequently, amniocentesis was performed, and no chromosomal abnormalities were found. On Detailed ultrasound, no abnormalities were detected. Nuchal translucency was normal as well (2.6).

The lady was evaluated by our Fetologist at 36 weeks 4 days, where an ultrasound was done below attached in figure (1), showed right-sided enlarged scrotum (5.7 * 3.4 cm), heterogenous in consistency, of mild cystic component, visible bowel peristaltic waves with no vascularity, there were no evidence of bowel obstruction, strangulation, or incarceration.
FIGURE 1: At 36-week of Gestational Age a transverse ultrasonographic image of the fetal scrotum showing right-sided enlarged scrotum (5.7 * 3.4 cm).

Neonatology and pediatric department were informed of the Lady’s condition for postnatal follow up and possible operative intervention.

At 39 weeks of gestation, the Lady presented for follow up. Her Gestational Diabetes was controlled. An ultrasound demonstrated oligohydramnios (DVP 2.9), so a decision for induction of Labor by cervical ripening agent (Prostaglandin E2) was made. After receiving one dose of Prostaglandin E2, the Lady refused to continue induction of Labor and underwent a Cesarean section. She gave birth to 3140-gram Male baby, with Apgar score 9/9 at 1 and 5 minutes, respectively. Follow up was normal for the mother and the babe during the first 6 months postpartum period.

Discussion
Prenatal congenital inguinal hernia is an extremely rare entity. The first case report published in the English literature and PubMed of prenatal diagnosis of congenital inguinal hernia was in 1992 by Israel Meizner et al in Israel [3].

In our case we highlight the significance of ultrasonographic features of prenatal congenital inguinal hernia. Even though pediatric inguinal hernia is commonly presented isolated, it could be associated with other anomalies like trisomy 18.

The third trimester organ targeted ultrasonography was considered highly effective in determining the features of the inguinoscrotal content. The accurate identification of the features of any inguinoscrotal hernia is critical and essential to be differentiated from other scrotal mass, as the management and prognosis will be completely different. On top of the differential diagnosis is hydrocele, as also must be aware of urogenital, testicular tumor and teratoma.

Viewing the bowel peristalsis, is pathognomonic and confirms the diagnosis of hernia which excludes other diagnosis, also the fluid-filled cystic structure inwards the scrotum indicates bowel appearance. While solid hyperdense content must carefully examined to rule out other diagnosis.

The most sensitive sonographic characteristic of fetal inguinoscrotal hernia are visualization of bowel peristaltic waves within the scrotum, which is considered the pathognomonic feature [4]. The clinicians must be aware of ruling out any signs of bowel incarceration and strangulation where they display bowel...
loop dilation, abnormal bowel peristaltic movements, and vanishing blood flow. As the management otherwise is urgent surgery which is lifesaving and critical rather than later elective herniorrhaphy either laparoscopic or open approach according to the experience of the surgeon in case the hernia not complicated, nor incarcerated, nor strangulated.

Conclusions
Routine prenatal care is mandatory and essential in pregnancy as the organ targeted ultrasonography is the gold standard method for detailed description of the fetus organs status and for early detection of any organ’s malformations. It is highly important and valuable to report and add to the literature such a rare finding during prenatal care investigation and declare the most significant and pathognomic ultrasonographic feature of prenatal congenital inguinal hernia, which is visible bowel peristaltic movement waves.

Additional Information
Disclosures
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