International Journal of Scientific Reports
Smitha K et al. Int J Sci Rep. 2015 May;1(1):94-95
http://www.sci-rep.com
pISSN 2454-2156 | eISSN 2454-2164

DOI: http://dx.doi.org/10.18203/issn.2454-2156.IntJSciRep20150212

Case Report

Fetus in fetu double trouble: a rare case

Smitha K*, Nirmala Shivalingaiah, Harsha Biliangady

Department of Obstetrics and Gynecology, Kempegowda Institute of Medical Sciences, Bangalore-560004, Karnataka, India

Received: 17 April 2015
Accepted: 25 April 2015

***Correspondence:**
Dr. Smitha K,
E-mail: smithakeshava@gmail.com

ABSTRACT

Fetus in fetu is a rare condition with incidence of 1 in 500,000 deliveries. Since the condition was first described by Meckel in the late18th century, approximately less than 100 cases have been reported in the literature. We present the findings in a case of FIF that was diagnosed prenatally and we discuss the differential diagnosis between a FIF and a highly differentiated teratoma.

Keywords: Fetus in fetu, Teratoma, Ultrasound

INTRODUCTION

Fetus in fetu is a rare condition with incidence of 1 in 500000 deliveries. Since the condition was first described by Meckel in the late18th century, approximately less than 100 cases have been reported in the literature.[1]

It is a pathologic condition resulting from abnormal embryogenesis in a diamniotic, monochorionic monozygotic pregnancy. It is a malformed parasitic twin included in host twin due to unequal division of totipotent cells of a blastocyst, resulting in the inclusion of small cellular mass in a more mature embryo. this latter point is still controversial as some believe FIF to represent a highly organized teratoma. It is a fetiform calcified mass or an encapsulated pedunculated vertebral tumor.[2]

We present findings in a case of FIF that was diagnosed prenatally and we discuss differential diagnosis between a FIF and a highly differentiated teratoma

CASE REPORT

A 22-year-old primigravida, nonconsanguious married life of 1year, presented to our department with gestational age of 25 weeks, on examination uterus 28 weeks with slight excess liquor.

Ultrasound scan revealed a fetal abdominal cyst 18.2x5.6x5 cm with a well formed foetal thigh with femur, rudimentary knee joint\spine was visualized.

The mass was well circumscribed and power Doppler investigation revealed minimal blood flow below the rudimentary spine and ventral portion of the mass.

At this stage an endoparasitic FIF was diagnosed. She had loss of fetal movements, intrauterine fetal demise was diagnosed.

Pregnancy was terminated by medical method. Fetogram confirmed the scan findings, on autopsy an encapsulated mass was found below the left dome of diaphragm. The mass contained coils of intestine.

The second mass contained thigh with rudimentary foot, both masses were surrounded by a membranous sac that appeared to represent an amnion (Figure 1 & 2).

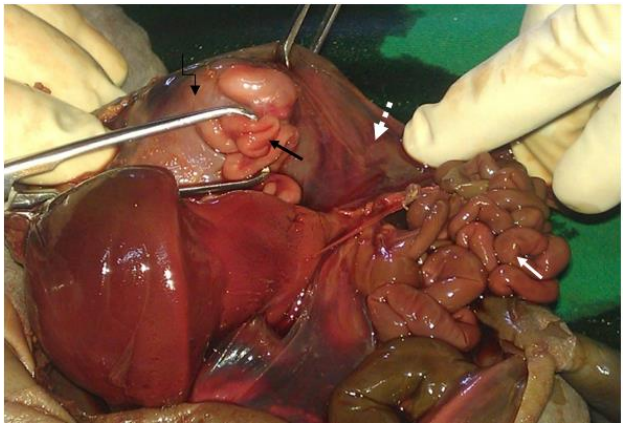

Figure 1: Cyst opened to show coils of intestine of the primary (white arrow) and secondary fetus (black arrow), cyst wall (dotted white arrow), thigh (bent arrow).

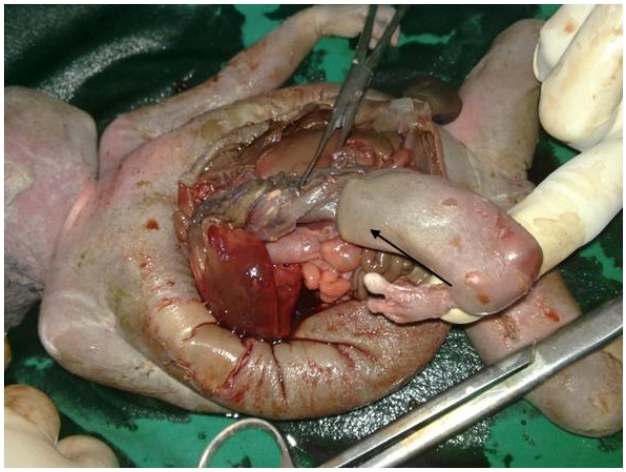

Figure 2: Thigh and rudimentary foot of secondary fetus (black arrow).

DISCUSSION

FIF is a parasitic monozygotic tumor predominantly found in neonates and children, with 89% cases presenting before the age of 18 months and only 3 cases reported after the age of 15 years. Fetus in fetu presents as a lump in the abdomen (70%) and the retroperitoneal space is the commonest site (80%). Other rare sites include sacro-coccygeal region, intracranial, thorax, pelvis and the scrotum. Single parasitic fetus is the commonest presentation (88%), multiple fetus ranging from 2-5 have also been reported. The organs demonstrated are namely; spine in 91%, limbs in 82.5%, CNS in 55.8%, GIT in 45%, Vessels in 40% and GUT in 26.5% cases respectively.[3] Malignant transformation is rare in fetus in fetu and only one case has been reported in literature. There is a controversy whether a fetus in fetu is the distinct entity or a highly organized teratoma. The presence of vertebral column is an important diagnostic criterion which suggests the development of a notochord which in turn is an advanced primitive streak stage. This fulfills the Willis criteria which stresses much emphasis on the development of axial skeleton and vertebral axis. This reflects Kim's reverse

Definition of a teratoma as 'an accumulation of pluripotentialcells in which there is neither organogenesis nor vertebral segmentation. Fetus in fetu occurs in upper retro peritoneum while Teratoma occurs in the lower retro peritoneum, pelvis, ovary and sacrocoocygeal regions. A non-calcified vertebral column invisible on radiograph or on CT scan or its total absence (9%) does not exclude diagnosis of fetus in fetu[4].A new diagnostic modality (molecular analysis) is using an informative genetic marker, for uniparental isodisomy of chromosomes 14 and 15, if it shows no genetic difference between the host and the Fetiform mass, then it is diagnostic of fetus in fetu.[4] However, the presence of a bony vertebral axis with appropriate limb arrangement on gross is an important diagnostic feature which was observed in the studied case, thus confirming the diagnosis of fetus in fetu.

Funding: No funding sources
Conflict of interest: None declared
Ethical approval: Not required

REFERENCES

1. Mills P, Bornick PW, Morales WJ, Allen M, Gilbert-Barness E, Johnson PK, et al. Ultrasound prenatal diagnosis of fetus in fetu. Ultrasound Obstet Gynecol. 2001;18:69-71.
2. Hoefel CC, Quy K, Phan HT, Nghia Hick Jruong, Nguyen TS. Fetus in fetu: a case report and literature review. Pediatrics. 2000;105(6):1335-44.
3. Hong SS, Goo HW, Jung MR, Kim HJ, Kim EA, Kim KS, et al. Fetus in fetu: three-dimensional imaging using multidetector CT. AJR Am J Roentgenol. 2002 Dec;179(6):1481-3.
4. Murtaza A, Kanhaiya C, Sadha M, Sabiha M. Fetus in fetu: a rare presentation in an adult female. Oman Med J. 2010;25:43.

Cite this article as: Smitha K, Shivalingaiah N, Biliangady H. Fetus in fetu double trouble: a rare case. Int J Sci Rep 2015;1(1):94-5.