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ABDOMINAL POLYCYSTIC TUMOR PRENATALLY DIAGNOSED ON ONE OF THE FETUSES OF A TRIPLET PREGNANCY OBTAINED THROUGH IN VITRO FERTILIZATION: CASE REPORT

Dinu-Florin Albu*, Cristina-Crenguta Albu and Stefan-Dimitrie Albu

University of Medicine and Pharmacy Carol Davila, Bucharest, 37 Dionisie Lupu Street, 1st District, 020022, Bucharest, Romania.

***Author for Correspondence: Dr. Dinu-Florin Albu**
University of Medicine and Pharmacy Carol Davila, Bucharest, 37 Dionisie Lupu Street, 1st District, 020022, Bucharest, Romania.

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ABSTRACT
We present the case of a patient aged 33 years, who resorted to in vitro fertilization, as a last resort to get pregnant. Following this procedure, a triplet pregnancy resulted. Ultrasound investigation, using a Voluson E10 ultrasound, 3D and 4D module highlighted: triplet pregnancy 23 weeks old in evolution: A male fetus without visible malformations on the ultrasound, estimated weight of 421 g; B male fetus with right paravertebral abdominal polycystic tumor looking like unilateral multicystic dysplastic kidney associated with right megaureter. Estimated fetal weight is 410 g; C male fetus without visible malformations on the ultrasound, estimated weight of 438 g. It is the first case described in the literature of an abdominal polycystic tumor prenatally diagnosed on one of the fetuses of a triplet pregnancy, resulting from in vitro fertilization.

KEYWORDS: abdominal polycystic tumor, multicystic dysplastic kidney, megaureter, triplet pregnancy, IVF, ultrasound.

INTRODUCTION
Fetal tumors represent a rare and heterogeneous group of abnormalities.[1] The early detection of a fetal tumor and understanding of its imaging features are very important for fetal, maternal, and neonatal care.[2] Fetal intra-abdominal cystic tumors are quite rare entities and their differential diagnosis is difficult.[3, 4, 5] Prenatal diagnosis is based on the visualization of tumor of variable size and internal structure.[1] Tumors may appear as completely cystic, mixed or predominantly solid with obvious calcifications.[1] A multicystic dysplastic kidney is a form of renal dysplasia that leads to a non-functioning organ due to abnormal and incomplete kidney development.[6] Based on the available ultrasound data, the overall incidence of unilateral multicystic dysplastic kidney can be estimated to be around 1 in 4300.[6] Multicystic dysplastic kidney has been described to be associated with other dysmorphologies and urinary tract abnormalities. The aim of this paper is to describe the first case in the literature of the an abdominal polycystic tumor prenatally diagnosed on one of the fetuses of a triplet pregnancy, resulting from in vitro fertilization.

CASE REPORT
The patient R.D., aged 33 years, comes to our clinic in her 23 week pregnancy for an ultrasound investigation. We have to mention that it is a non consanguine Caucasian couple. Following in vitro fertilization, the current triplet pregnancy was obtained, (Figure 1 and Figure 2).

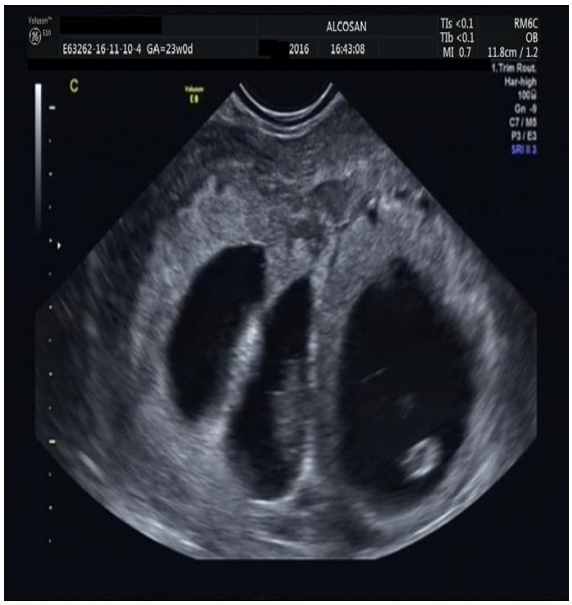

Figure 1 – Triplet pregnancy (2D ultrasound examination)

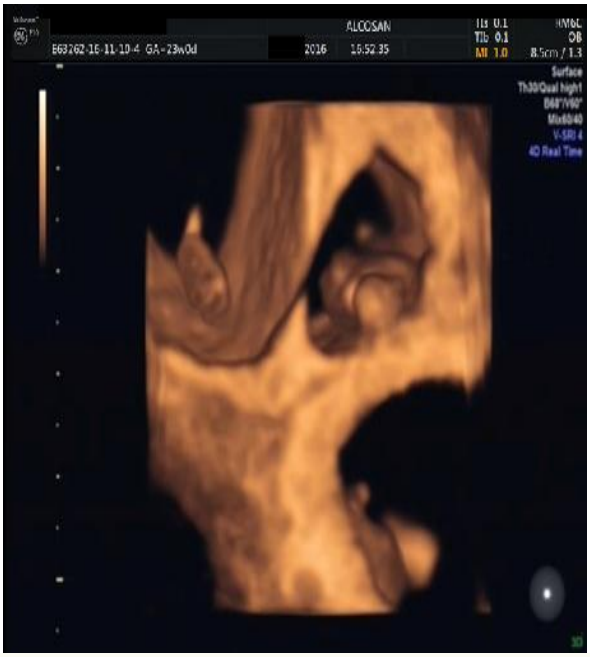

Figure 2: Triplet pregnancy (3D ultrasound examination, 4D Real Time)

MATERIALS AND METHODS

Ultrasound examination at 17 weeks of pregnancy, double test and triple test, selective ultrasonography for detection of fetal abnormalities, 3D and 4D live scan with General Electric Echograph Voluson E10 was performed.

RESULTS

The ultrasound examination performed using a Voluson E10 ultrasound, 3D and 4D module shows the following. The A fetus is a male fetus without visible malformations on the ultrasound. Estimated fetal weight is 421 g.

Fetus B is male fetus too. The ultrasound examination shows the abdomen with normal configuration, anterior-posterior diameter: 47.2 mm, transverse diameter: 56.6 mm and abdominal circumference: 173.6 mm.

The B fetus presents an abdominal multilocular polycystic tumor, with complex structure, 36/18 mm, paravertebral situated, in the right side, looking like unilateral multicystic dysplastic kidney, probably teratoma, associated with a long formation with transonic effect, probably megaureter, (Figure 3 to Figure 6). Estimated fetal weight is 410 g.

Fetus C is male fetus too, without visible malformations on the ultrasound, estimated weight of 438 g.

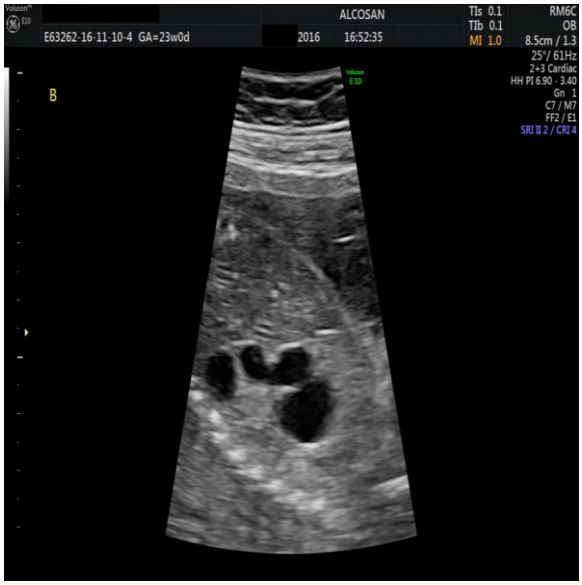

Figure 3 - Fetus B: Unilateral multicystic dysplastic kidney (2D ultrasound examination)

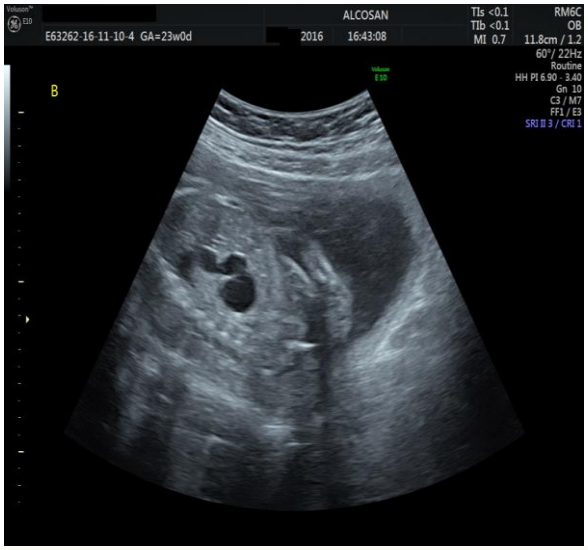

Figure 4 - Fetus B: Unilateral multicystic dysplastic kidney and megaureter (2D ultrasound examination)

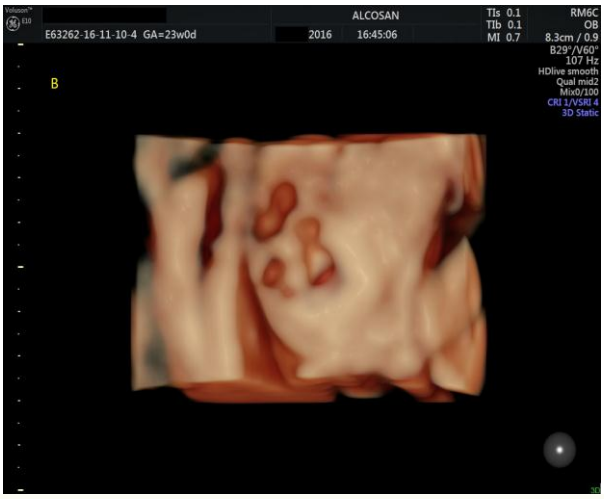

Figure 5 - Fetus B: Unilateral multicystic dysplastic kidney (3D Static ultrasound examination)

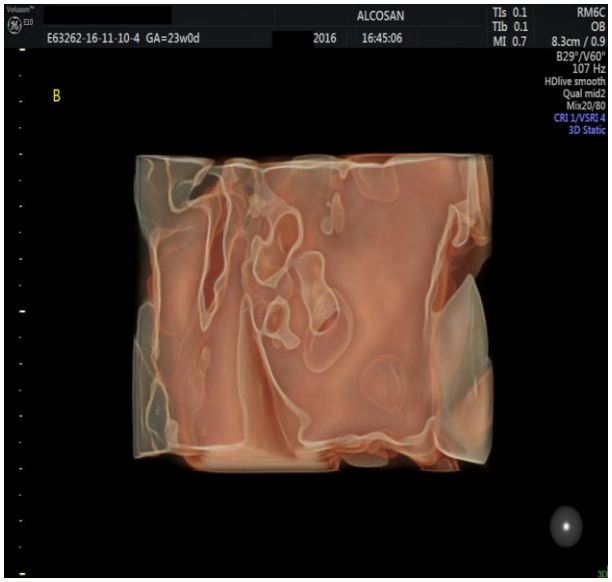

Figure 6 - Fetus B: Unilateral multicystic dysplastic kidney (3D Static ultrasound examination)

Double test was found normal. Triple test was not sensitive to the presence of a possible chromosomal abnormalities.

With the parents consent, the abnormal fetus reduction is decided, by an intracardiac injection of KCl solution performed at 28 weeks of gestation. At 39 weeks of gestation, the normal twins was extracted by cesarean birth. At the moment, the mother and her babys are feeling well.

DISCUSSION

The term "fetal tumor" should be used when it is evident that the tumor arises during the prenatal period.[1, 7] The concept of abdominal cystic tumor encompasses many cystic lesions developing from abdominal structures and representing distinct pathologies.[3] One of the several classifications divide fetal tumors into choristoma, hamartoma, embryoma, teratoma and malignant neoplasm.[1] In differential diagnosis ovarian cysts, enteric duplication cysts, mesenteric cysts, meconium pseudocysts and choledochal cysts should be considered apart from cysts with renal origin.[4, 8, 9]

The first description of an MCDK at autopsy was in 1836 and the first description of an MCDK removed at surgery was reported a century later.[10] Unilateral MCDK is a condition that does not lead to any complaints *per se*, except for potential mechanical problems due to a large abdominal mass in rare cases.[11]

Multicystic kidney represents 20% of all abdominal masses, is poorly organized, enlarged, cystic, nonfunctional and is consistently associated with ipsilateral segmented atresia of the ureter and ureteropelvic junction occlusion.[12]

The prenatal diagnosis of a multicystic kidney is suggested by the presence of multiple cysts, (Figure 3 to Figure 6).

The peculiarities of this case are the following.
Triplet pregnancy, obtained after in vitro fertilization, three male fetuses, two normal (fetus A and C) and the other affected (the fetus B).

Fetus B, malformed, presents an abdominal multilocular polycystic tumor, with complex structure, 36/18 mm, paravertebral situated, in the right side, looking like unilateral multicystic dysplastic kidney, probably teratoma.

The abdominal multilocular polycystic tumor, presented by B fetus is associated with megaureter.

Prenatal diagnosis was established early, at 23 weeks of pregnancy and later, at 28 weeks of gestation, With the parents consent, the abnormal fetus reduction is decided. At 39 weeks of gestation, the normal twins was extracted by cesarean birth.

CONCLUSION

It is concluded that case of fetal tumor deserves careful and individual approach taken into account all relevant clinical, ethical and social factors.[1] The prenatal diagnosis is necessary for the detection of fetal abnormalities to all pregnancies and especially for the risk categories.[13]

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