Fetal lateral neck cysts: case report and review of literature

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ABSTRACT

Fetal lateral neck cysts (FLNC) are small fluid filled accumulations located in the anterolateral region of the fetal neck; they can be unilateral or bilateral. They are usually found on the occasion of nuchal translucency scan, in the early second trimester.

These structures are part of the fetal lymphatic system in development. They are present in few fetuses, therefore they could be a soft marker for aneuploidy, or could be a normal variant and of no clinical significance.

Key words: Fetal lateral neck cysts.

SOMMARIO

Le cisti cervicali laterali sono piccoli accumuli di fluido localizzati nella regione anterolaterale del collo fetale; possono essere unilaterali o bilaterali. Si visualizzano di solito durante l'esecuzione della translucenza nucale, nel secondo trimestre iniziale.

Queste strutture fanno parte del sistema linfatico fetale in via di sviluppo. Sono presenti raramente, e potrebbero essere un soft marker per aneuploidie o una variante della norma priva di significato clinico.

Parole Chiave: Cisti cervicali fetali.

CASE REPORT

A 36-year-old gravid 2 para 1, without relevant medical history, came to our centre in her 12th week of gestational age of a biamnotic twin pregnancy, in order to perform her first trimester screening ultrasound examination. The first twin showed the presence of bilateral cervical cysts of 5.5 mm and 4.5 mm in diameter respectively. The cysts were homogenous, anechoic with a thin well defined parietal layer, and no flow signal at Doppler examination was detected. The morphology of the first twin was however normal for g.a., as anterior placenta and amniotic fluid were both normal. The nuchal translucency performed on the first twin measured a thickness of 1.45mm. The other twin appeared normal in morphology as well: its nuchal translucency was 1.40 mm thick and its posterior placenta and amniotic fluid were normal. Second twin's neck morphology was normal at ultrasound examination. The woman was then scheduled for follow-up check after three weeks.

Nonetheless, the patient asked to undergo an amniocentesis and this procedure was performed during the 16th week of gestational age. At this time US examination showed great dimensional reduction of the cysts, which measured 2.5 mm and 2mm respectively. Karyotype of the first twin was 46XY normal and so it was for the second twin , 46XX normal. At 20 weeks of g.a., US examination of the first twin's neck did not show any cysts at all. US examination was also performed during the 24th, 28th and the 32nd week of g.a., in order to monitor fetal growth: each time US examination showed normal morphology and normal fetal growth, standing by the 45th percentile of the male twin and by the 34th for the female. In the 37th week of gestational age a caesarian section was performed due to transverse position of the female twin. At birth, the newborns weighted 3260 gr. (male) and 2370 gr. (female), and none of them showed cervical anomalies. At their first follow-up check, both twins were aging four weeks and continued to appear clinically normal and showed normal neural and behavioral development.

DISCUSSION

Lymphatic vessels drain into large sacs, placed laterally to the jugular veins, until 40 days of intrauterine life. Their terminal part, known as lymphatic duct on the right and thoracic duct on the left, later connect to the venous system(1). The anterolateral fetal neck cysts express a delay or failure of this connection process(2). These findings have been considered a normal variant but 5% have been associated to abnormal karyotype(3). If they are unilateral or bilateral is unimportant. In the event of an isolated finding with no association to other fetal malformation or a pathological NT,

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the risk of chromosomal aberrations is negligible[4]. In this case it doesn't represent an indication for fetal karyotype[5] .

FLNCs are rarely mentioned in the English literature, where you can find an incidence between 1.6% [3] (Bronstein 1993) and 2.8% [4] When the finding is isolated, it usually disappears around the 16th week of pregnancy[6] On the contrary, if it doesn't occur, it is advised to perform the karyotype[7].

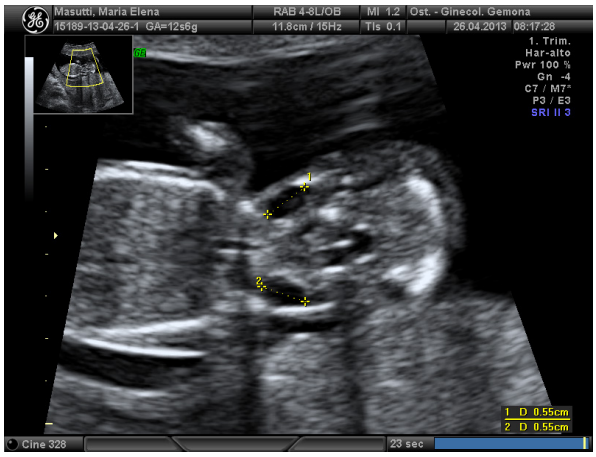

Figure 1.
12 weeks, fetal lateral neck cyst, coronal view.

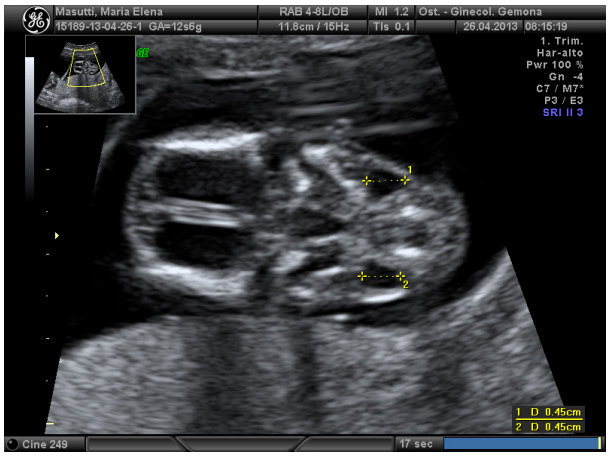

Figure 2.
12 weeks, fetal lateral neck cyst, oblique-transverse view.

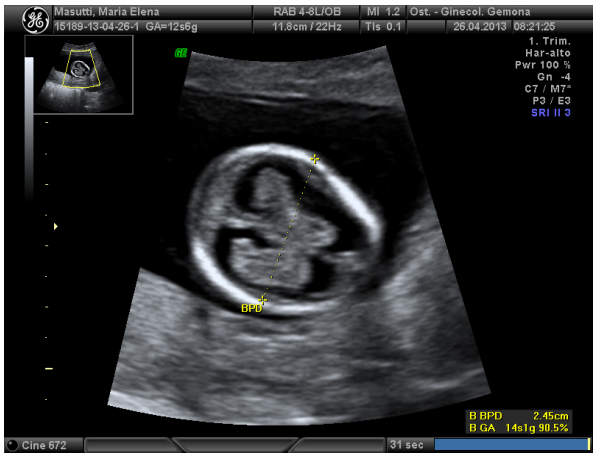

Figure 3.
12 weeks, biparietal diameter.

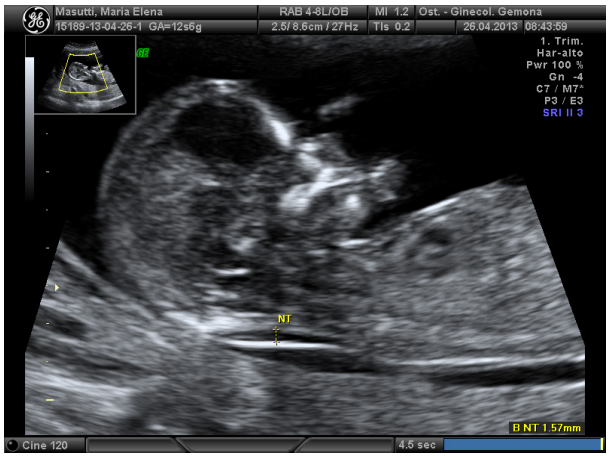

Figure 4.
12 weeks, midsagittal view.

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