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Giant Cystic Umbilical Cord in a Post-Term Nigerian Neonate

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ABSTRACT

Background/Aims: Umbilical cord cysts may be described as true cysts or pseudocysts. True cysts have an epithelial lining and are remnants of the allantoin while pseudocysts arise from liquefaction of Wharton's jelly. Umbilical cysts complicate as many as 3% of pregnancies but generally regress by the end of the 1st trimester. Cysts that persist beyond 12 weeks may be associated with other malformations.Giant umbilical cord pseudocysts are extremely rare malformations.

Methods: Reports from the records of a one-day old male referred to ournewborn unit were reviewed. Details of his treatment, progress and ultimate discharge were documented.

Results/Case Report: A one-day old male delivered via emergency caesarean section on account of foetal distress was referred to our newborn unit on account of a large umbilical cord. GA at delivery was 43 weeks. Birth weight was 4kg. No anomalies were recorded on prenatal Ultrasound Scan. A large cystic swelling was noted extending for most of the length of the cord. Three umbilical vessels could be seen clearly through the swelling. Largest diameter was about 8cm. Systemic examination was essentially normal. Abominopelvic ultrasound scan showed normal findings.

Conclusion: Giant cystic umbilical cords are rare and may be associated with chromosomal or other significant structural anomalies. In the absence of other anomalies, treatment is conservative as cyst regresses with time.

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Introduction

Umbilical cord cysts may be described as true cysts or pseudocysts. True cysts have an epithelial lining and are remnants of the allantoin while pseudocysts arise from liquefaction of Wharton's jelly [1]. Umbilical cysts complicate as many as 3% of pregnancies but most are known to regress by the end of the 1st trimester, and are only identified incidentally on prenatal ultrasound scanning. Cysts that persist beyond 12 weeks may be associated with other malformations [2-4]. Genetic aneuploidy is usually present when there are associated malformations [1,5].

Giant umbilical cord pseudocysts are extremely rare malformations with only a handful of reports in the literature. They are usually diagnosed prenatally and the appearance is unmistakable postnatally [6-15]. They may be associated with a patent urachus which is considered the most serious associated anomaly. It is believed that retrograde micturition through a patent urachus may cause swelling of the Wharton's jelly [6-8, 10-13] . Giant cystic umbilical cords may also be isolated and occur without associated urinary tract anomalies [9,10]. The prenatal differential diagnosis includes true cord cysts, pseudocysts, umbilical vascular disorders, abdominal wall defects and bladder extrophy [9].

We present the case of a post-date macrosomic infant who was referred to our newborn unit on account of a giant cystic umbilical cord. To the knowledge of the authors, this is only the third case report of umbilical cyst in the literature from Nigeriaand the first case report of a giant cystic umbilical cord [1,3].

Case Report

A one-day old male delivered via emergency caesarean section on account of foetal distress was referred to our newborn unit on account of a large umbilical cord. Gestational Age at delivery was 43 weeks. Birth weight was 4kg. No anomalies were recorded on prenatal scanning. A large cystic swelling was noted from the foetal end of the cord and extending for most of the length of the cord (Figures 1-2). Three umbilical vessels could be seen clearly through the swelling. Largest diameter was about 8cm. Length was about 18cm. Systemic examination was essentially normal and there were no obvious dysmorphic features. Abominopelvic ultrasound scan showed normal findings. The cystic swelling progressively regressed and was eventually detached two days post admission. No urine leakage from the umbilical stump throughout admission.

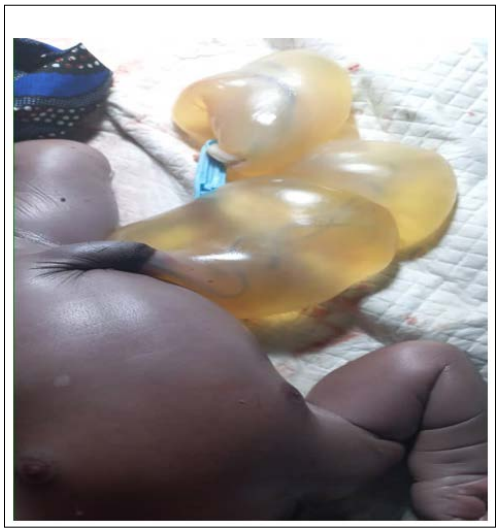

Figure 1

Figure 2

Discussion

A giant umbilical cord is a rare finding and usually diagnosed on prenatal ultrasonography. The prenatal differential diagnosis includes true cord cysts, pseudocysts, umbilical vascular disorders, abdominal wall defects and bladder extrophy. Giant umbilical cords can be isolated as in the case of our index patient or may be associated with a patent urachus [6]. Prenatal ultrasonography is not definitive for patent urachus and thus it is important for newborns with giant cystic cords to have as much evaluation as possible including an abdominopelvic ultrasound scan, cystourethrography and karyotyping. Our index patient had a normal abdominopelvic ultrasound scan, however cystourethrogram and karyotyping are yet to be done [6-9]. There was however no urine leakage through the umbilical stump after the cyst regressed which would suggest a patent urachus. Our patient was delivered via an emergency Caesarean section on account of foetal distress [6]. This may have been due to compression of the umbilical vessels during labour. Four of the case reports identified reported delivery through emergency Caesarean section due to foetal bradycardia or a non-reassuring foetal heart rate [6-7,9,13]. This emphasizes the need for prenatal diagnosis of cysts and close monitoring and subsequent prompt operative intervention during labour if a giant cyst is suspected. Intrauterine foetal demise has been known to be associated with a giant cystic umbilical cord, likely due to vascular compromise. Cysts associated with a patent urachus would usually require operative intervention with resection of the persistent patent urachus [15]. Isolated giant cysts without associated anomalies may only require monitoring till regression [9].

Conclusion

Giant cystic umbilical cords are rare and may be associated with chromosomal or other significant structural anomalies. In the absence of other anomalies, treatment is conservative as cyst regresses with time.

References

1. Nwankwo NC, Manuel BA, Dariah PS (2020) Umbilical Cord Cyst: A Case Report. The Nigerian Health Journal 10: 183-186.
2. Hannaford K, Reeves S, Wegner E (2013) Umbilical cord cysts in the first trimester: Are they associated with pregnancy complications? J Ultrasound Med 32: 801-806.
3. Onyishi NT, Ezechukwu P, Ohayi SR (2018) Myxoid and pseudocystic degeneration of the umbilical cord. Libyan Journal of Medical Sciences 2: 147.
4. Zangen R, Boldes R, Yaffe H, Schwed P, Weiner Z (2010) Umbilical cord cysts in the second and third trimesters: significance and prenatal approach. Ultrasound in Obstetrics and Gynecology 36: 296-301.
5. Jauniaux E, Donner C, Thomas C, Francotte J, Rodesch F, et al. (1988) Umbilical cord pseudocyst in trisomy 18. Prenatal diagnosis 8: 557-563.
6. Wildhaber BE, Antonelli E, Pfister RE (2005) The giant umbilical cord. Archives of Disease in Childhood-Fetal and Neonatal Edition 90: F535-F536.
7. Nobuhara KK, Lukish JR, Hartman GE, Gilbert JC (2004) The giant umbilical cord: an unusual presentation of a patent urachus. Journal of pediatric surgery 39: 128-129.
8. Rosner-Tenerowicz A, Florjanski J, Paslawski W, Piatek A, Zimmer M (2021) Cystic dilatation of umbilical cord associated with patent urachus. Ginekologia polska 92: 595-596.
9. Lew J, Elmekkawi A, Kukreti V (2019) A giant cystic umbilical cord. Paediatrics & Child Health. Paediatr Child Health 26: 12-13.
10. Schaefer IM, Männer J, Faber R, Loertzer H, Füzesi L, et al. (2010) Giant umbilical cord edema caused by retrograde micturition through an open patent urachus. Pediatric and Developmental Pathology 13: 404-407.
11. Tekesin I, Küper-Steffen R (2018) Prenatal Diagnosis and Clinical Course of a Patent Urachus Associated with an Allantoic Cord Cyst and a Giant Umbilical Cord. Ultrasound international open 4: E104-E105.
12. Haac B, Garcia A, Moore J (2017) Urachal remnant presenting as a giant, cystic umbilical cord. Pediatric surgery international 33: 393-395.
13. Aihole JS (2020) Giant Umbilical Cord. Journal of Neonatal

Surgery 8: 35.

14. Mugarab Samedi V, Miller G, Saade E, Kalaniti K (2020) A giant umbilical cord: Benign finding or surgical emergency?. Clinical case reports 8: 398-399.
15. Brooks K, Guileyardo J, Le D, Joykutty J (2017) Giant cystic umbilical cord associated with patent urachus and intrauterine fetal demise. InBaylor University Medical Center Proceedings. Taylor & Francis 30: 209-210.