

## CASE REPORT

## The giant umbilical cord

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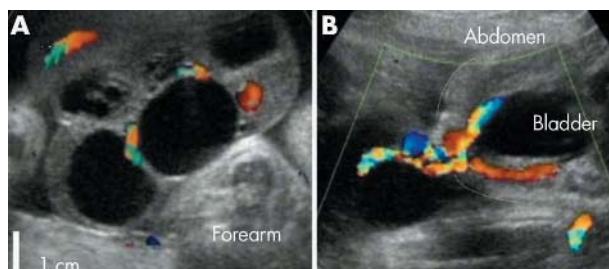
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The giant umbilical cord is a rare malformation of the umbilical cord that can easily be diagnosed on prenatal scans and is unmistakable postnatally. We report a case to highlight issues of this rare finding. Visual diagnosis is easy and surgical repair is usually required.

Routine ultrasound (US) at 20 weeks gestation revealed a fetus with two cystic masses in the umbilical cord near the fetal insertion site (fig 1A). Doppler imaging showed normal flow through the usual umbilical vessels and there was no apparent connection between the cysts and the fetal bladder (fig 1B). Thereafter, serial US showed appropriate fetal development, although the size and number of the cysts increased. At 39 weeks gestation, repeat fetal bradycardia during spontaneous labour led to an emergency caesarean section. The giant umbilical cord (GUC) of the patient was first clamped 30 cm from the abdominal wall where it became thinner (fig 2). The diameter of the umbilicus measured 3 cm and a frail reddish structure within it was noted; the lobulated, homogeneous, hypertrophic Wharton's jelly measured 28×12 cm and three umbilical vessels were easily identified. A US to exclude a patent urachus was inconclusive, the cord was clamped just above the skin, and the umbilicus was examined histologically. The dried umbilical stump detached after 10 days, but a granulomatous structure remained. The baby represented 1 week later because of transparent fluid loss from the umbilicus, noted during urination and crying (fig 3). US and cysto-urography revealed a connection between the umbilicus and bladder; at the same time posterior urethral valves were excluded. Surgical resection of the persistent patent urachus was performed at 19 days of life and the postoperative course was uneventful.

## DISCUSSION

Prenatal differential diagnosis of GUC (that is, umbilical cord cysts) includes pseudo-cysts (degeneration of Wharton's jelly), omphalo-mesenteric duct cysts (absence of complete obliteration of the omphalo-mesenteric duct), vascular disorders, abdominal wall defects, bladder extrophy, and urachal anomalies.<sup>1</sup> Detection of a GUC prenatally should lead to close monitoring of the mother and fetus because of possible vascular compression by the cystic mass particularly at term and during labour, resulting in fetal compromise, as in the present case.<sup>1</sup> Discussion of the preferred mode of delivery should take account of the size of the lesion.<sup>2</sup> On prenatal US, the presence of a connection between the fetal bladder and the umbilical cord confirms a diagnosis of a patent urachus.<sup>3,4</sup> However, this pathognomonic feature is not always apparent.<sup>2</sup> Congenital patent urachus is a very rare condition occurring in 1–2.5:100 000 deliveries<sup>1,2</sup> and is only rarely associated with other anomalies such as posterior urethral valves. Postnatally, in any case of GUC, we recommend a thorough investigation of the umbilical stump, including histology, abdominal US, and cysto-urography.



**Figure 1** Prenatal ultrasound. (A) Umbilical cord with several large cysts. (B) Fetal bladder and umbilical vessels.



**Figure 2** Postnatal manifestation of a giant, cystic, umbilical cord with unusually large umbilicus. (Photograph reproduced with permission)



**Figure 3** Discharge of urine through the umbilicus noted at clinical examination at 2 weeks of age. (Photograph reproduced with permission)

**Abbreviations:** GUC, giant umbilical cord; US, ultrasound

## CONCLUSIONS

GUC is easily diagnosed prenatally and is obvious postnatally. The pathogenesis of GUC should be considered, leading to a very restricted differential diagnosis. Surgery is usually required, not for the condition itself but for the cause of the condition.<sup>5</sup>

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Consent was obtained for the publication of these patient details

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