Dystocia Caused by Congenital Hydronephrosis

by K. H. Ng
F.R.C.S. (E.), M.R.C.O.G.
Dept. of Obstetrics & Gynaecology,
Faculty of Medicine,
University of Malaya,
Kuala Lumpur,
Malaysia.

and S. Sivanesan
M.B.B.S.
Dept. of Pathology,
Faculty of Medicine,
University of Malaya,
Kuala Lumpur,
Malaysia.

CONGENITAL MALFORMATIONS are not uncommon. Malpas (1937) gave the incidence as 21 per 1000 births. Most cases deliver spontaneously but some major malformations may cause dystocia. The incidence of major malformations with dystocia is 0.75 per 1,000 total births (Monks, 1969). Hence obstetricians seldom encounter this complication, but when they are faced with such an obstetric emergency they have to act adeptly. We report here a rare cause of dystocia caused by congenital hydronephrosis.

Case Report

The patient, an Indian woman aged 33 years, was admitted on 9th November 1970 at 36 weeks gestation. She had 5 previous full-term normal deliveries. On admission her blood pressure was 150/100 and she had gross oedema. The uterus was full-term size with hydramnios. X-ray abdomen was not helpful because of the hydramnios and marked oedema of the anterior abdominal wall. Labour was induced because of the pre-eclampsia. At full cervical dilatation there was no descent of the presenting part (breech) into the pelvis; hence caesarean section was performed.

At operation the breech was in the pelvic brim. The grossly distended abdomen was obstructed at the level of the pelvic brim. A fresh stillborn infant weighing 2,200 gm. was delivered. It had multiple external congenital abnormalities and a grossly distended abdomen.

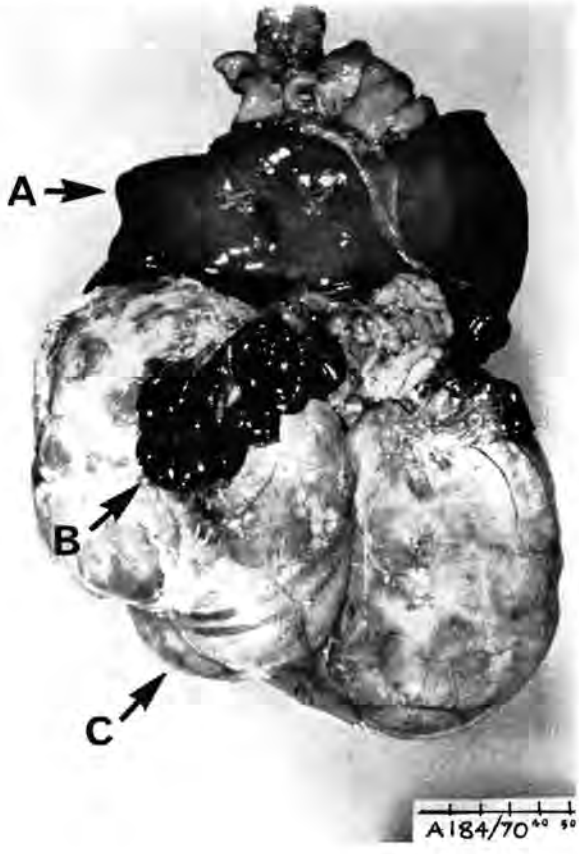
Post-operatively, the mother's condition was satisfactory. When discharged on 20th November 1970 her oedema had almost completely subsided and her blood pressure had returned to normal.

Postmortem examination on the foetus was carried out. This showed no congenital abnormalities of the respiratory system. Both lungs were collapsed. The heart was normal in appearance. The abdomen was distended with ascitis. The stomach showed a small diverticulum arising from the fundus but there was no abnormality seen in the diaphragm. The intestines were malrotated and displaced forwards and upwards by a large, oval retroperitoneal, cystic mass measuring 11.0 x 19.0 cm. arising in the right renal fossa and extending across the midline, anterior to the inferior vena cava. Dissection of the mass revealed that it was a right hydronephrotic kidney with hydroureter. The cortex and medulla were atrophic and represented as a convex body on the right margin of the cystic mass. The surface of the mass was traversed by numerous small arteries and veins (See Fig. 1). It contained approximately 100 ml. of urine and the distended calyces gave it a loculated appearance. The hydroureter terminated 2.0 cm. above the bladder, the remaining distal portion of the ureter was represented by a somewhat flattened pinkish white band. At the junction of the hydroureter and the band, a valve-like fold of ureteral mucosa was seen obstructing the lumen. No twists or kinks of the ureter were present and no aberrant renal vessel was found. The left kidney and ureter showed no abnormality and communicated with a normal bladder.

Discussion

It is rare for major foetal malformations to cause dystocia because they are often associated with premature labour (Claye, 1963). If the condition is diagnosed early induction of labour is

recommended, but usually this complication is unsuspected until it is found impossible to deliver the shoulders, the abdomen or the breech. Foetal abdominal swellings are seldom diagnosed before dystocia occurs but x-rays may show the "Buddha attitude" of the foetus. Such foetal abdominal swellings may be caused by abdominal neoplasms, distended bladder, ascitis, and congenital cystic kidneys (Barr and MacVicar, 1956). It is rare for such conditions to cause dystocia unless the abdomen is grossly distended or there is associated ascites as in the case described. Clark and Gipson (1948) described a case in which after delivery of the head they had difficulty in delivering the large abdomen with bilateral polycystic kidneys causing dystocia.



Congenital hydronephrosis may be due to congenital ureteral stricture, valves, twists or kinks. The pathologic changes proximal to the obstruction depend on the degree and duration the obstruction has been present. The atrophic right kidney and the large hydronephrosis and hydroureter suggest that urinary flow was impeded relatively early in the foetus and the obstruction was of a severe degree. At autopsy, a valve-like fold of ureteral mucosa was found to obstruct the ureteral ulmen. Such folds of redundant mucosa have been demonstrated in the foetal ureter, usually in the lower third (Culp, 1967). They are a rare cause of hydronephrosis.

Foetal dystocia may be managed by vaginal destructive operations or caesarean section. chassar Moir (1964) wondered if destructive operations are justified in modern obstetrics, with the relative inexperience of obstetricians in these dangerous operations compared to the relative safety of caesarean sections. However, if the major foetal malformation causing dystocia is incompatible with life, destructive operations still have a place in developing countries provided they are done by experienced obstetricians without endagering the life of the mother.

Summary

A rare case of congenital hydronephrosis with ascitis causing dystocia is reported. The literature and the management of congenital malformations causing dystocia is reviewed.

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