DYSTOCIA DUE TO FOETAL ASCITES

by

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and

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Ever since its original description by Mauriceau (1681), foetal ascites has been a baffling problem which has aroused the interest of paediatricians and obstetricians alike. Reliable figures, as regards the incidence of the condition, are not available. Lord (1953) observed two cases in the 8000 deliveries studied by him. Two cases were met with in 4082 consecutive deliveries at the Medical College Hospital, Calicut. The trends are likely to be parallel in other parts of the country. The paucity of publications on the entity from our country is hence most surprising. As far as could be ascertained, there have only been 4 reports in Indian literature. (Gupta and Das, 1931. Sarma, 1960; Kishore and Pathak, 1961; and Dayal et al., 1962). The present communication relates to a case proved at autopsy to be mainly due to a striking megalobladder consequent on urethral obstruction. It is interesting to recall that distension of the foetal urinary bladder had been described as a possible cause of foetal ascites by Fordyce, (1894). Other likely causes mentioned by him included: (1) collection of fluid in the peritoneal cavity or true ascites; (2) cystic degeneration of the liver; (3) anasarca; (4) congenital polycystic kidneys; and (5) fluid distension of the female genital tract. The practice of using the designation 'Foetal Ascites' as a rack on which to hang foetal losses of varied aetiology is to be deplored, and it would seem desirable to carry out autopsies on all cases, to avoid overlooking the occasional, but highly interesting and instructive type of case as the one under consideration. Occurrence of dystocia due to distension of the urinary organs has been reported by several authors. (Spicer, 1909; Edgecombe, 1930; Jeffcoate, 1931; Savage, 1935; Shaw and Marriott, 1949; Beacham and Beacham, 1952; Still, 1955; Strickland and Bowes, 1957; Sarma, 1959; Train, 1959; Kishore and Pathak, 1961; and Dayal et al., 1962).

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Case Report

A 40-year-old woman was hospitalized with obstructed labour, the membranes having ruptured 8 hours prior to admission. The term of gestation was 28 weeks, and she furnished a history of having had 3 full-term normal deliveries, and 2 abortions previously. The last delivery had occurred 13 years ago, and the current pregnancy had run a normal course. History of malformations in previous offspring or in close

relatives of the parents was not forthcoming, and the marriage was not consanguinous. Apart from moderate anaemia, general examination did not reveal anything abnormal. The head and shoulders which had already been delivered were seen outside the vulva. The foetal heart was inaudible. Vaginal examination revealed that the cervix was fully dilated and that the foetal abdomen was greatly enlarged. Perforation of the foetal abdomen was carried out below the left costal margin taking care not to injure the maternal soft parts. About 3 pints of clear straw-coloured fluid drained freely. Delivery could now be completed by gentle traction.

The male infant had a birth weight of 5 lbs. 3 oz. The abdominal parieties were lax, the abdomen being still distended in its lower portion. Except for left-sided talipes, no other abnormalities were evident on surface examination. At autopsy, it was found that the urinary bladder was greatly hypertrophied and distended. The ureters on both sides were also greatly enlarged, being ballooned out in their lower parts. The kidneys were larger than normal. On section, a moderate degree of hydronephrotic dilatation was present in both pelves and major calyces. A probe could be passed up to the prostatic urethra, but would not enter the bladder due to the presence of a stricture in this region. Section did not reveal any urethral valves. The other viscera were normal.

Fig. 1

Discussion

The relationship of foetal ascites to congenital lower urinary tract obstruction is well known and has been amply documented. Organic posterior urethral obstruction can be detected in a surprisingly large number of cases. Radman (1962) points out that urinary tract anomalies have been demonstrated at autopsy in 50 per cent of reported cases. There has been no uniformity of opinion as to the genesis of ascites in urinary tract obstruction. Lord (loccitras) discounts the theory of hypofunction of the damaged kidneys and pressure on the great vessels by the grossly distended bladder. France and Beck (1954) incriminated transudation from the dilated bladder or ureters, or from the coexistent thin-walled cysts on the kidney surface. The collection of fluid in the foetal urinary bladder has been equally shrouded in controversy, and would seem to result from an as yet enigmatic pathological process.

Jeffcoate (1931) divides cases of dilatation of urinary organs at birth into two distinct groups: A larger one with manifest urethral obstruction, and a smaller one without. The theory of neuromuscular imbalance was suggested by Spicer (loccitras) with regard to the latter group. We would, however, be most wary of accepting neuromuscular inco-ordination as a cause of bladder enlargement. Ano-rectal anomalies, cryptorchidism, and communications between the urinary and the intestinal

tracts are among the commoner associated anomalies, though none of these were met with in the case under review. According to Sarma (1959), the well documented association with talipes may be helpful in making an antenatal radiologic diagnosis. It is to be kept in mind that an imperforate urethra or stricture does not necessarily lead to enlargement of the bladder. The incidence of urethral obstruction was assessed at 0.028 per cent of all births by Malpas (1931). Easton (1961) has emphasized that few of these show abdominal distension from urinary secretion, and that in even fewer, does this cause dystocia.

In sharp contradistinction to other malformations, the condition is more often met with in the offspring of younger women. There is a definite sex predilection, most of the reported cases having been males. Coexistent polyhydramnios as well as oligohydramnios has been reported, and labour has very often been premature. Obstetric intervention was required in 14 out of 60 cases of foetal ascites (Sarma, 1960). Abdominal enlargement may present an insuperable obstruction to delivery of the trunk. Apart from foetal ascites, dystocia has been encountered from miscellaneous conditions like distension of the female reproductive tract (Dorland, 1919), polycystic kidneys (Clark and Gibson, 1948; Allan and Moghissi, 1957; Francis, 1961; Radman, 1962), cystic and tumorous liver (Hagstrom, 1930; Askin and Gesichikter, 1935; Weinberg and Radman, 1943) and kidney tumours (Von Reuss, 1920). Sarma (1960) states that dystocia has been reported from foetal megacolon as well as from large urachal cysts. It is a source of satisfaction that despite the high frequency of dystocia met with, rupture of the uterus has never been reported in these cases.

The diagnosis is made in most cases only when the progress of labour is arrested, following the delivery of the head and shoulders in cephalic, and of the lower limbs in breech presentations. A vaginal examination at this stage, permits a confident diagnosis to be made, and perforation of the foetal abdomen may be necessary to complete delivery. Undue distension of the mother's abdomen may be suggestive but more often than not, there is little to arouse suspicion. Prenatal radiography is most valuable. Puigy Roig (1948) as well as Barr and MacVicar (1956) have reported cases of foetal ascites thus diagnosed. Displacement of limbs away from the trunk, polyhydramnios, absence of foetal halo, straightening out of the spine, and the bell-shaped thorax resulting from the splayed-out ribs and distended abdomen are characteristic of foetal ascites in utero. (Sarma, 1960). Predelivery diagnosis is important in view of the success of operative correction of the associated foetal uropathy. A caesarean section may profitably be resorted to in such cases. The fatalistic attitude towards gross congenital malformations needs to give way to a more rational and optimistic outlook. It would indeed be struthious folly in this neoteric era, to deem redundant efforts towards salvage of these unfortunate infants.

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