CASE REPORT

HYDROCOLPOS IN AN INFANT

BY

G. O. RICHARDSON, M.B., Ch.B.

Late Assistant Pathologist at the Royal Victoria Infirmary, Newcastle-on-Tyne,

AND

G. A. SMART, M.D., B.Sc., M.R.C.P.

Medical Registrar at the Royal Victoria Infirmary, Newcastle-on-Tyne.

The association of imperforate vagina with secretion and consequent retention of fluid is a rare condition in infancy. The following is a case in which it caused the death of the infant.

P. E., a female child of two months, had been noticed to have a large abdomen at birth which had become increasingly distended so that a hernia appeared at the umbilicus. The child was well fed and there was no constipation. She was the second of two illegitimate children, the elder being apparently healthy. A diagnosis of colonic dysfunction had been made and rectal catheters passed without any alteration in the size of the abdomen.

On admission the child was emaciated and restless. In the lower part of the abdomen in the mid-line there was a large cystic mass. Part of the contents of the abdominal cavity were herniated through the umbilicus, and coursing over the abdominal wall were numerous large distended veins (fig. 1). Rectal

FIG. 1.

examination revealed a large, firm, cystic swelling, situated in the mid-line, the lower pole of which was in the pelvis. X-ray showed the small bowel to be pushed into the flanks by a large opaque mass situated in the pelvis and in the middle line of the abdomen. The vulva was examined carefully, since it was thought to be oedematous, but there was no evidence of a bulging hymen. The possibility of imperforate hymen with hydrocolpos was not considered.

With increasing distension the infant began to vomit, and the general condition rapidly deteriorated. Paracentesis was performed and about 15 oz. of offensive opaque brown fluid withdrawn. The child died a few hours later. Non-haemolytic streptococci were cultured from the fluid.

Autopsy report. The body was that of an emaciated female infant with an enormously distended cystic abdomen. The parietal peritoneum was thickened and discoloured, and contained a small quantity of foul smelling fluid. The

FIG. 2.

FIG. 3.

large and small intestine were compressed into a small area in the upper half of the abdomen. The mesentery of the small intestine was not attached to the posterior abdominal wall. There was a large cystic swelling arising out of the pelvis and apparently covered by peritoneum. This mass, together with the genito-urinary tract, was removed intact and dissected. It was then clear that the cyst was in continuity with the uterus which was situated at the upper pole and had been protruding through the umbilicus. The hymen was found to be imperforate, and the mass was shown to consist of the vagina, distended by fluid until it was approximately spherical and had a diameter of six inches. Both ureters were compressed with consequent dilatation and early hydro-nephrotic renal atrophy (fig. 2).

The mass was sectioned sagittally in the mid-line disclosing a large thick-walled cyst with no external orifice filled with 20 oz. (approximately) of dark-

brown fluid which gave a positive benzidine reaction. The wall of the cyst was smooth save at one portion, the inferior extremity, where there was a circular pigmented ulcerated area 2.0 cm. in diameter immediately in front of the anal canal. The uterus was thick-walled and of the adult type with a distended cavity (fig. 3).

TABLE

CASE NO.	AUTHOR	AGE	SIGNS AND SYMPTOMS	TREATMENT AND REMARKS
1	Breisky (1879)	Newborn	Fluctuant bleb at vulva	Incision produced abundant thick mucus, containing epithelial cells
2	Bunzel (1900)	Newborn	Tumour at vulva	Spontaneous rupture released milky fluid
3	Cranwell (1905)	1 month	Abdominal and perineal swelling	Incision produced small amount of pus with 400 g. lemon-yellow fluid. After death autopsy showed imperforate vagina with a septum a few millimetres behind the hymen. Section showed hypertrophy of vaginal and uterine epithelium.
4	Godefroy (1856)	2 months	Tumour protruding between labia	Incision produced teaspoon of mucus: hymen 2 mm. thick.
5	Guilleminet and Gayet (1938)	6 years	Abdominal pain, diarrhoea and constipation, retention of urine	Appendicectomy with later hymenotomy. Large amount of pus, varied flora. No recurrence
6	Kereszturi (1940)	6 weeks	Irritability, constipation followed 4 weeks later by anuria: tense abdominal wall, cyanotic perineum, bulging membrane between labia: pyrexia: bilateral hydronephrosis and hydroureter	Laparotomy: pelvic tumour, compression of which caused hymen to bulge: hymenotomy released 2 oz. milky fluid, sterile on culture. After 20 months hydroureter and hydronephrosis had almost recovered.
7	Melodia (1935)	7 years	Anuria for 24 hours, pelvic tumour and bulging hymen	Incision produced 300 c.c. pus with varied flora
8	Rocher and Balard (1932)	2 days	Tumour at vulva	Incision, followed by cautery and silver nitrate, produced foetid pus containing <i>B. coli</i> and streptococci
9	Salazar de Sousa (1934)	25 days	Loss of weight, spells of crying, vulva protruding, pyuria followed by anuria	Hymenotomy released a 'huge' (?) amount of sterile vaginal fluid
10	Wiener (1917)	12 years	Difficulty in micturition and enlarged abdomen, imperforate hymen, mass up to umbilicus	Incision produced 30 oz. of thin yellow fluid with no pus and negative culture

Comment

Ten cases (see table) have been reported in the literature occurring in female children before puberty; only three of these caused any marked symptoms, and one (case 3) caused the death of the infant. Cranwell (1905) showed that the uterine epithelium was hypertrophied in his case. It was impossible to make any histological examination owing to the unfortunate destruction of the specimen, and therefore no light can be thrown on its etiology. In spite of the rarity of the condition, it seems justifiable to draw attention to it as a cause of an abdominal swelling in infancy which may have fatal consequences, but which is amenable to simple surgical intervention.

Thanks are due to Dr. J. C. Spence for his advice and permission to publish this case.

REFERENCES

- Breisky, A. (1879). *Die Krankheiten der Vagina*, in Billroth, T.: *Handbuch der Frauenkrankheiten*, Stuttgart, 3, 595.
- Bunzel, R. (1900). *Prag. med. Wschr.*, 25, 349.
- Cranwell, D. J. (1905). *Rev. gynéc.*, 9, 635.
- Godefroy, M. (1856). *Gaz. Hôp.*, 29, 567.
- Guilleminet, and Gayet, R. (1938). *Lyon méd.*, 161, 561.
- Kereszturi, C. (1940). *Amer. J. Dis. Child.*, 59, 1290.
- Melodia, G. (1935). *Med. infant.*, 6, 132.
- Rocher, H. L., and Balard (1932). *Bull. Soc. Pédiat. Paris*, 30, 208.
- Salazar de Sousa, C. (1934). *Arch. Méd. Enf.*, 37, 721.
- Wiener, S. (1917). *Amer. J. Obstet. Gynec.*, 75, 398.