HYDROCELE FOLLOWING PLACEMENT OF A VENTRICULOPERITONEAL SHUNT

CASE REPORT

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SUMMARY — The authors report the case of a two years old patient with hydrocele after ventriculoperitoneal shunt procedure.

Hidrocele após colocação de derivação ventrículo-peritoneal: registro de caso.

RESUMO — Os autores registram um caso de hidrocele surgida após colocação de shunt ventrículo-peritoneal em paciente com dois anos de idade.

Numerous abdominal complications have been reported subsequent to ventriculo-peritoneal shunting procedures for the treatment of hydrocephalus¹. Intra abdominal complications of peritoneal shunts include: perforation of the gallbladder; inguinal hernia, ascites and cyst formation; intestinal volvulus and obstruction, perforation of a viscus, or to the outside; spread of neoplasm or infection to the peritoneal cavity^{2,8,9}.

Although a variety of complications have been well documented, there has been little attention given in the literature to the association with hydrocele illustrated in the following case.

CASE REPORT

FH, a two year old male patient, had undergone repair for hydrocephalus; a ventriculo-peritoneal shunt was placed at thirty days using a Raimondi middle-pressure peritoneal catheter. The course was uneventful; on routine pediatric evaluation swelling of the scrotum was noted without evidence of inguinal bulge (Fig. 1). Abdominal roentgenogram revealed the catheter tip in the right scrotum (Fig. 2), and uncomplicated surgical repair and shunting repositioning followed.

COMMENTS

Ventriculoperitoneal shunts are the procedure of choice in the treatment of hydrocephalus at our institution. We present an unusual complication of this procedure.

The first cerebrospinal fluid (CSF) shunt to the peritoneal cavity is credited to Ferguson³ who in 1898 laid a silver wire in a fistulous tract from the lumbar sub-arachnoid space at the body of L-5. This method and all other early attempts failed, and it was not until about 25 years ago that some success was reported^{5,6}. When the Spitz-Holter valve and suitable catheter material became available, the technique

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Fig. 1 — Patient FH: right hydrocele.

Fig. 2 — Patient FH: X-ray films showing the catheter tip in the right scrotum.

of ventriculovenous shunting became popular. It was soon learned that serious complications with ventriculoatrial shunt were not infrequent and, in 1967, attention was again turned to the peritoneal cavity. The history of the evolution of ventricular shunting for hydrocephalus is largely related to efforts in preventing the complications of shunting. Until a time in which pharmacologic control of CSF production will be achieved, the treatment of hydrocephalus will rely mainly on the establishment of artificial conduits for the venting of CSF from the ventricular system. Such devices have been fraught with mechanical and biological complications.

Hydrocele as a complication of a peritoneal shunt has been cited as an infrequent finding in one reported earlier series⁷. Recently a 26% incidence of clinical inguinal hernia has been noted to occur on the average within seven months after the initial ventriculoperitoneal shunt procedure⁴. These findings suggest that particular attention should be given to subtle signs of inguinal hernia or increasing hydrocele formations both before and specially after peritoneal shunting. In particular, the inguinal and scrotal areas should be regularly observed by all those responsible for evaluating peritoneal shunt functioning.

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