MIGRATION OF THE PERİTONEAL CATHETER OF A VENTRICULOPERITONEAL SHUNT INTO THE SCROTUM: CASE REPORT

Ahmet SELÇUKLU M.D., Aydın PAŞAOĞLU M.D., Hidayet AKDEMİR M.D., Ali KURTSOY M.D., İkram KAVUNCU M.D.

Erciyes University Medical Faculty, Department of Neurosurgery KAYSERİ

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SUMMARY :

Migration of a peritoneal catheter of the shunt system into the scrotum was encountered in a seven-month-old who had received a V-P shunt. This was considered a rare complication of a V-P shunt and the causal mechanism of this kind of complication is discussed with a review of the literature.

KEY WORDS:

Hydrocephalus, Peritoneal catheter migration, Scrotum, Ventriculoperitoneal shunt

INTRODUCTION

The most used common current procedure for treatment of hydrocephalus is either ventriculoperitoneal (V-P) or vertriculoatrial (V-A) shunt (10.13).

The Peritoneal catheter of a V-P shunt may cause serious rare complications such as pseudocyst, intestinal obstruction or perforation, intractiable ascites, inguinal hydrocele and migration into the gastrointestinal tract, abdominal wall, bladder, vagina or scrotum (1,9,14,16,18).

In this article, we present a case of the migration of a peritoneal catheter into the scrotum and discuss the causal mechanism of this kind of the complication with a review of the literature.

CASE REPORT

A Three-days-old male infant was operated on for cervical meningocele and discharged healthy from hospital after ten days. He was readmitted to our department and a V-P shunt operation was performed. There was no complication related to the procedure when discharged and he achieved uneventful physical growth for about seven months. After seven months he was readmitted to our department because of a right scrotal swelling. On examination he had no neurological deficit and the head growth was normal. The flushing device appeared to be functioning when compressed manually. Swelling of the right scrotum was evident and abdominal X-Ray examination demonstrated a coiled catheter in the right scrotum (Fig 1).

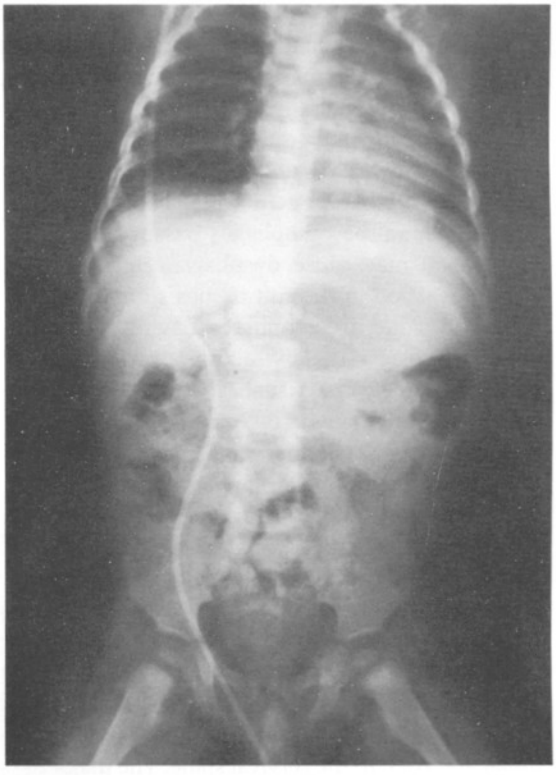

Fig. 1 : The migrated catheter in the scrotum

Exploration of the inguinal canal was performed by a pediatric surgeons and the peritoneal catheter was seen to have entered the scrotum through the inguinal canal. At this moment, peritoneal catheter slid into abdominal cavity by itself. There was no evidence of infection or adhesive reaction. The hernia sac was ligated. The shunting system was functioning

thus did not reviced. The postoperative course was uneventual and the patient was discharged ten days after the operation.

DISCUSSION

In addition to more frequent complications of V-P shunt, there are rare complications such as downward or upword migration of catheter (5,7). Migration of the shunted catheter has been known to occur in various ways such as into the lateral ventricle, mediastinum, chest, fastrointestinal tract, abdominal wall, bladder, vagina and scrotum (2,4,5,6,7,8,9,14,18).

Bristow et al. (3), Levy et al. (11), Ramani et al (15) and Redman et al. (16) have reported migration of a peritoneal catheter into the scrotum through the unobliterated processus vaginalis. The tube was not dissected in any of those cases. In the case of Fuwa et al. (7) the dissected peritoneal tube had totally migrated into the scrotum. In all the reported cases and in our case the shunt procedure was performed in patients under 10-months-old. As Rowe et al. (17) pointed out, the processus vaginalis is patent in 50-60 % of children under one year of age, and increased abdominal pressure due to cerebrospinal fluid may prevent obliteration of the processus vaginalis.

Impaired resorption of cerebrospinal fluid may increase the abdominal pressure and lead to the development of inguinal hernia and hydrocele. Grosfeld et al. (9) reported that inguinal hernia was seen in 16.8 % of children who had undergone V-P shunt procedure. Murtagh et al. (12) reported that among 53 children, who had received a V-P shunt, two cases eventually developed hydrocele as a late complication. The cause of such cerebrospinal fluid malabsorbtion is not known exactly. However, chronic irritation of the peritonium or subclinical peritonitis are possible factors (1).

In our case, the catheter migration seems to be due to a patent processus vaginalis since there was no evidence of infection or adhesion.

Correspondence: Ahmet Selçuklu M.D.,
Erciyes Üniversitesi Tıp Fakültesi
Nöroşirürji ABD
KAYSERİ

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