Migration of the peritoneal catheter of a ventriculoperitoneal shunt into the scrotum

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Ventricular shunt is a well-established modality in the management of hydrocephalus. However, it can be associated with numerous complications and disastrous consequences. The reported incidence of intra-abdominal complications in infants and children following ventriculoperitoneal (VP) shunt procedures is about 24% and most of these patients present with abdominal signs and/or intracranial sepsis. In this article we report on a 2-year-old boy who presented with swelling in the right inguino-scrotal region. Imaging showed migration of the peritoneal catheter into the right scrotum.

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Ventriculoperitoneal (VP) shunt is a well-established modality in the management of hydrocephalus. However, it can be associated with numerous complications and disastrous consequences. The reported incidence of intra-abdominal complications in infants and children following VP shunt procedures in the literature is about 24% and most of these patients present with abdominal signs and/or intracranial sepsis.

In this article we report on a 2-year-old boy who presented with swelling in the right inguino-scrotal region. Imaging showed migration of the peritoneal catheter into the right scrotum.

Discussion
Herniation of the peritoneal catheter of the VP shunt into the scrotum is a rare phenomenon with only few case reports in the literature. It has been emphasised that the development of scrotal swelling or hydrocele in a child with a VP shunt should raise the possibility of a shunt complication. An explanation of the migration of the peritoneal catheter is difficult but migration of the peritoneal catheter into the scrotum tends to occur in younger children because of the higher incidence of an unobliterated processus vaginalis and smaller volume of the peritoneal cavity in these patients. Further increased abdominal pressure due to cerebrospinal fluid infusion in the peritoneal cavity through the shunt system may prevent obliteration of the processus vaginalis and chronic catheter irritation and fluid flow from the tubing may be responsible for the scrotal swelling. Prompt surgical repair of the hernia and repositioning of the peritoneal catheter is recommended as there is increased risk of incarceration in infancy and chronic catheter irritation and fluid flow from the tubing may be responsible for the scrotal swelling. In older children it may not be appropriate as by this time is has been obliterated.

As reported in the literature, migration of the peritoneal catheter into the scrotum in our patient was due to a patent processus vaginalis and an additional effect on increased intra-abdominal pressure.
References