

# RECTAL EXTRUSION OF A LUMBOPERITONEAL SHUNT CATHETER: CASE REPORT

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## **SUMMARY:**

*A case is presented in which the peritoneal end of a catheter extruded spontaneously through the rectum.*

## **KEY WORDS:**

*Hydrocephalus, lumboperitoneal shunt, rectal extrusion*

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## **INTRODUCTION:**

Placement of a lumboperitoneal shunt is an established procedure for treatment of normal pressure hydrocephalus. According to Agha, diversion of cerebrospinal fluid from the lumbar subarachnoid space to the peritoneal cavity was suggested by Ferguson in 1898 (3).

However, patients with peritoneal shunts are at risk of suffering a variety of complications. One is the extrusion of the abdominal catheter through the rectum which as reported here is a rare complication of lumboperitoneal shunt surgery.

## **CASE REPORT:**

A 59-year-old woman was admitted to hospital in January 1989. She had difficulty in walking and urinary incontinence for three months. Examination disclosed spastic paraparesis and gait ataxia. No demential sign was found. Computerized tomography showed ventricular dilatation. The symptoms and signs, computed tomography (CT) findings and other investigations confirmed the diagnosis of normal pressure hydrocephalus. A lumboperitoneal

shunt of the Hayer-Schulte type was inserted for the treatment of normal pressure hydrocephalus. On discharge the patient was in good condition and slight recovery of paraparesis was noted. One month later she was readmitted to hospital when the distal part of the catheter was found to be protruding from the anus. She was afebrile, the abdomen was soft with normal peristalsis and there was no sign of peritoneal irritation. A midline laparotomy was performed and it was seen that the intraperitoneal part of the catheter was enveloped between the sigmoid colon and the omentum. There was fibrous encasement throughout its intraperitoneal course. When the fibrous encasement was resected it was seen that the site of the perforation was the tip of the sigmoid colon. One month after the laparotomy the patient suffered ascending myelitis and died from respiratory and subsequent cardiac arrest.

## **DISCUSSION**

There have been several reports of abdominal complications from shunting procedures. These include the puncture of the

gallbladder and pneumothorax (18), inflammatory pseudotumour of the mesentery (12), intestinal volvulus (20), extrusion of the abdominal catheter into the scrotum, from the thigh, through the umbilicus, mouth, rectum, and vagen (2,4,9,10,17,19,22), intestinal perforation (1,5), abdominal cyst formation (7,16), inguinal hernia (11,14), intrahepatic, transdiaphragmatic and intragastric migration (6,13,15,21) and liver abscess (8).

Although the real mechanism of bowel perforation still remains obscure, it is most likely to be a result of foreign body reaction. After the adhesion of the abdominal catheter to the serosal surface of the colon, prolonged contact forms a decubitus ulceration on the intestinal wall (1). When the intestinal perforation completed the catheter was propelled distally by peristalsis and extrusion of the catheter through the rectum was occurred. In the presence of bowel perforation abdominal symptoms are infrequent as in our patient, because the perforation is gradual and fibrous encasement of the catheter occurs throughout its peritoneal course. However, bowel perforation may be the life-threatening risk giving rise to meningitis, ventriculitis or generalized peritonitis. In view of the high mortality rate associated with these complications, early diagnosis of bowel perforation is essential.

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