Case Report

Retained Percutaneous Tube—A Misery of Illiteracy

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Percutaneous catheter drainage of liver abscesses is an established technique. Intracavitatory knotting of the tube is a rare and potentially preventable complication that can involve significant morbidity. However, because of the rarity of this complication, there remains a persistent lack of awareness in the clinical community. The risk of tube knotting can be reduced with proper technique and correct choice of tubes. [*Asian J Surg* 2007;30(2):141–2]

Key Words: catheter, knotting and coiling, percutaneous tube

Introduction

Percutaneous catheter drainage of live abscess is a standard method of treatment especially for big sized abscesses.[1] The catheter is placed into the abscess cavity under ultrasound or computed tomography guidance. This treatment is generally simple and very effective. We encountered a rare case where a percutaneous tube was put in a live abscess and for some reason was not removed for almost 2 years. This resulted in coiling and knotting of the tube, which finally required limited hepatotomy for its removal.

Case report

A 25-year-old man presented in surgical outdoor with a tube in right hypochondrium. There was hardly any discharge from the tube. On detailed interrogation, it was found that the percutaneous catheter was put in for liver abscess at a peripheral hospital 2 years ago. The patient was discharged after 3–4 days from the hospital with tube *in situ* after clinical relief. During subsequent follow-up, the tube was not removed as it continued to drain for about 4 weeks. Later, when attempts were made to remove it by simply pulling, it did not come out and caused severe pain. Afraid of pain, the patient did not visit the hospital for several months, hoping that the tube would automatically come out. After a lapse of about 1 year, when he visited the hospital again, the same story of nonretrieval and severe pain was repeated, which caused him to wait 1 more year before finally coming to us.

Plain X-ray (Figure 1) and ultrasound (Figure 2) revealed 4 × 4 cm size cavity with knotting and calcification around the tube. Manual pulling failed to remove the tube because of knotting, hence we planned its removal under anaesthesia. The liver was exposed by a right

Figure 1. X-ray shows coiled tube.

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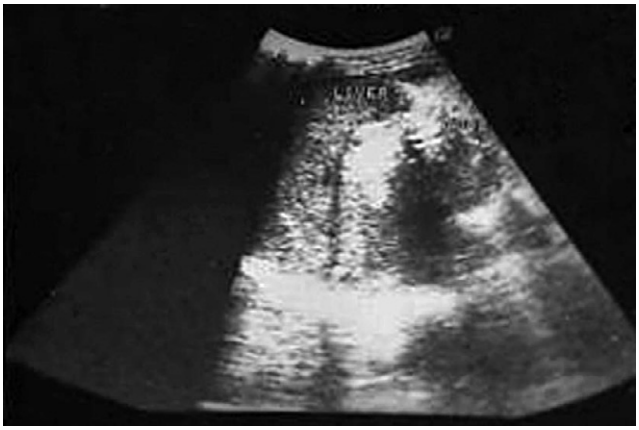

Figure 2. Ultrasound shows coiled tube in cavity.

Figure 3. Perioperative photograph shows coiled tube.

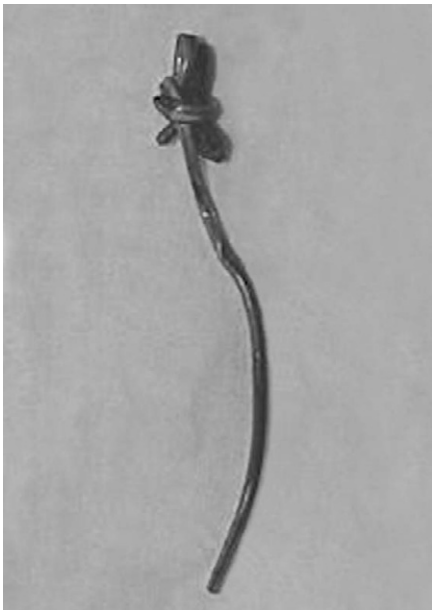

Figure 4. Coiled tube removed after surgery.

subcostal incision, the hepatic cavity was laid open by a small hepatotomy (Figure 3), and the tube was removed (Figure 4). Omentum was placed in cavity and hepatotomy sutured. The patient had an uneventful recovery.

Discussion

Percutaneous catheter drainage of abdominal abscess under ultrasound guidance is an established modality to avoid open surgical exploration.[2] Such tubes are easily removed by manual pulling after clinical relief and resolution of abscess. Although coiling and knotting of various catheter and tubes, i.e. peritoneal catheter, urethral catheters have been reported in the literature,[3,4] this event with regard to liver abscess is unheard of.

The main reason for the nonretrieval of the tube in the present case appears to be the coiling and knotting due to excess length in the cavity which possibly perpetuated as the size of the cavity reduced. Urethral catheter knotting is a well-described entity in world literature with an incidence of 0.2 per 100,000 catheterizations.[4] Similarly, coiling and knotting of peritoneal catheter leading to intestinal obstruction has been recently described.[3] But such type of coiling and knotting of percutaneous tube in liver abscess is yet to be reported. Various modalities, i.e. manual extractions under local or general anaesthesia, passage of guide wire under fluoroscopy to uncoil and open exploration has been described but are associated with significant morbidity, i.e. radiation exposure, anaesthesia, etc. Further, passage of guide wire and manual traction cannot be recommended in vascular organs like the liver without proper precautions. The present rare complication advocates the use of good quality minimally flexible tube, proper length of insertion, earliest removal after desired function is over, avoid enthusiastic effort to remove, and public and physician awareness of such complications.

References

1. Singh JP, Kashyap A. A comparative evaluation of percutaneous catheter drainage for resistant amebic liver abscesses. *Am J Surg* 1989;158:58–62.
2. Branum GD, Tyson GS, Branum MA. Hepatic abscess; changes in diagnosis and management. *Ann Surg* 1990;212:655–6.
3. Sanan A, Haines SJ, Nyberg SL, Leonard AS. Knotted bowel: small bowel obstruction from coiled peritoneal shunt catheter. *J Neurosurg* 1995;82:1062–4.
4. Arena B, McGillivray D, Dougerty G. Urethral catheter knotting: be aware and minimize risk. *CJEM* 2002;4.