Diagnostic and Interventional Endoscopy

Case Report

Retained Catheter Tip Fragment in the Abdominal Wall During Abdominal Paracentesis

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Abstract

Large-volume paracentesis is a safe procedure, but it has limited complications. We demonstrated a rare complication, including a retained catheter tip fragment in the abdominal wall during abdominal large-volume paracentesis. In this case report, we found that no complications developed in the follow-up of the peripheral venous catheter that was broken in the abdominal wall during paracentesis.

Keywords: Abdominal wall, large volume paracentesis, peripheral venous catheter

INTRODUCTION

Ascites is the most important health problem for patients diagnosed with liver cirrhosis. Twenty percent of cirrhosis patients have ascites at the time of diagnosis, and 20% of these patients die within the first year.[1] Large-volume paracentesis is the standard first-line treatment for patients with tense ascites who do not respond adequately to medical treatment or who have refractory ascites. Adverse events that may result from paracentesis include an overall significant bleeding rate ranging from 0% to 2.7%, ascitic fluid leakage from 0% to 2.35%, perforation at 0.83%, residual catheter tip fragment at 0.41%, and indwelling catheter tip fragments, which were reported in 0.41 cases.[1] In this article, we demonstrate a rare case of complication, including a retained catheter tip fragment in the abdominal wall during abdominal large-volume paracentesis.

CASE PRESENTATION

A 67-year-old male patient with a 9-month history of cryptogenic decompensated cirrhosis was hospitalized for progressive abdominal swelling and abdominal pain of 15 days duration. In his history, it was learned that intermittent large-volume paracentesis was performed longer than 8 months for refractory ascites and was unsuitable for transjugular intrahepatic portosystemic shunt. On physical examination, there were normal vital signs, tense distension of the abdomen, and clubbing. Abdominal ultrasound determined gross ascites and signs of liver cirrhosis, with a spleen size of 145 mm. During the large-volume paracentesis, the peripheral venous catheter (PVC) was placed into the abdominal cavity after 2-3 attempts. When the PVC

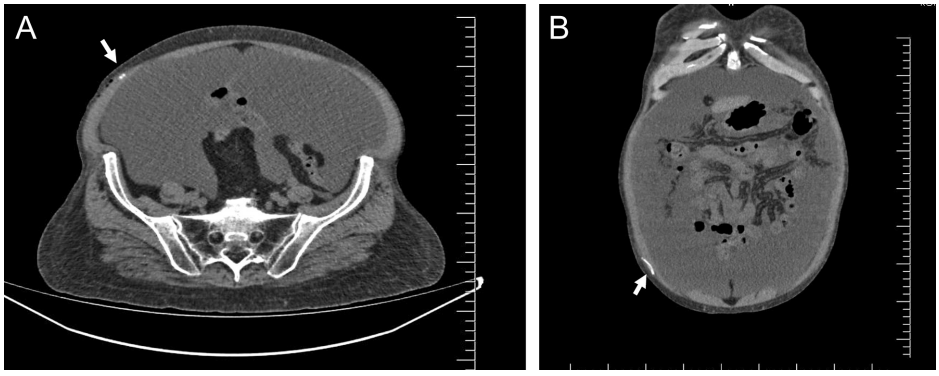

Figure 1. Abdominal computed tomography of the patient revealed a broken plastic tip of a 32.9 mm peripheral venous catheter: (A) in the axial and (B) in the coronal section of the right external oblique muscle.

was removed after 3 L of paracentesis, it was understood that the plastic part was fractured. Abdominal computed tomography of the patient revealed a broken plastic tip of a 32.9 mm PVC in the coronal section of the right external oblique muscle (Figure 1). The patient was operated on, but unfortunately, the residual plastic tip of the broken PVC could not be removed. It was decided to follow up with the patient. In his follow-up 3 years later, it was determined that there were no complications and the broken PVC was still in the abdominal wall. Informed consent was obtained from the patient who participated in this study.

DISCUSSION

The PVC is used especially during peripheral vein catheterization. However, it is also used for large-volume paracentesis.[1,2] Shaheen and Grimm[3] compared the Caldwell needle and cannulated angiocath in large-volume paracentesis and demonstrated that there were no complications with them. Although considered safe, fracture of the PVC tip may be encountered during peripheral intravenous catheterization.[4] One of the rare complications of paracentesis is the catheter tip fragment, with a rate of 0.41%.[5] In our patient, the fractured tip was left in the right external oblique muscle, and no complications were encountered within 3 years.

MAIN POINTS

- Large-volume paracentesis has adverse events.
- Residual catheter tip fragment is a rare complication of paracentesis.
- A broken plastic tip of a 32.9 mm peripheral venous catheter in the right external oblique muscle has not caused a complication within 3 years.

Informed Consent: Informed consent was obtained from the patient who participated in this study.

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