

Subclavian vein catheterization: A rare complication

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Abstract

Percutaneous subclavian vein catheterization is a widely used procedure for a variety of purposes. We describe here a previously unreported complication of this procedure.

Key words: Lymphatic cyst, subclavian vein catheterization

Introduction

We describe here an unusual lymphatic cyst presenting in the right infraclavicular region following subclavian vein catheterization. This complication has not been previously reported. Percutaneous subclavian vein catheterization is a widely used procedure for a variety of purposes. Complications have been documented extensively and include thrombosis,^[1] subclavian artery puncture,^[1] infection^[2,3] and perforation of the great vessels.^[4] Relatively uncommon complications include pneumothorax,^[3] pleural effusion,^[3] subcutaneous emphysema,^[3] retained fragments,^[5] chylothorax^[6] and rare complications reported include vertebral artery pseudoaneurysm.^[7]

Case Report

The patient, a 21-year-old female, presented to the surgical outpatient department with a 3 cm spherical swelling in the right infra-clavicular region. A right subclavian vein catheter had been previously inserted percutaneously prior to a major cardiac surgery. It was placed uneventfully, functioned normally and was removed postoperatively without complication. A year later, the swelling in the right infraclavicular area appeared and grew progressively without causing any symptoms. It was aspirated at a general hospital and disappeared. A

year later it recurred without causing any other symptoms. The Magnetic Resonance Imaging scans done at this hospital revealed a cystic swelling that was encasing the right subclavian and adjoining axillary vessels [Figure 1]. She underwent an excision of the swelling under general anesthesia, preserving the vessels. The cyst contained straw colored fluid in keeping with its lymphatic origin. On histopathological examination, the cyst was found to have a wall consisting of fibrous elements and occasional angiomatous components. The postoperative period was uneventful and the patient was discharged on the third postoperative day.

Discussion

We highlight here a previously unreported complication of subclavian vein catheterization.

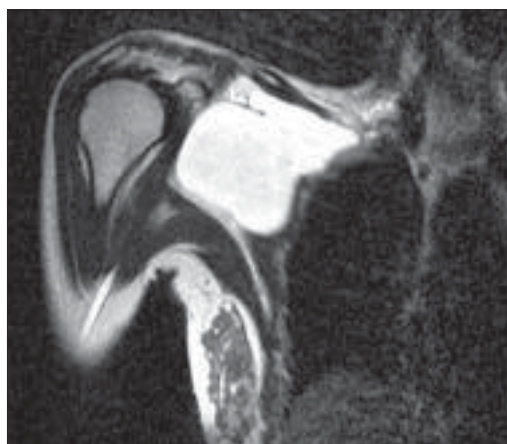


Figure 1: Magnetic resonance T2 contrast image showing cyst in the right infraclavicular area

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It is probable that when the subclavian vein catheter was placed, it could have damaged the right lymph trunk at the point where it joined the subclavian vein. The damage would have been minor enough to not cause immediate symptoms, but large enough to cause lymphatic fluid to accumulate slowly. The space being sufficient for a significant swelling to arise and the progress slow allowing fibrous elements to encase the fluid.

The recent onset and medical history pointed towards the subclavian catheterization as a possible cause of the problem. Clinical examination showed a cystic swelling deep to the pectoralis major. The Magnetic Resonance Imaging scans confirmed the position of the swelling and encasement of the vessels. At surgery, the presence of straw-colored fluid corroborated the idea of this being a lymph collection. Histopathology confirmed the diagnosis of an acquired lymphatic cyst.

This is a rare occurrence and we recommend that lymphatic cyst formation be added to the list of complications relating to subclavian vein catheterization.

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