

CASE REPORT

Lymphocele in an infant

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INTRODUCTION

A lymphocele is a collection of lymphatic fluid that is not circumscribed by an epithelial wall. We report a case that developed in a 3-month-old after surgical removal of a huge hemangiopericytoma in the left side of the neck.

CASE-REPORT

A first-born full-term boy was referred to our otorhinolaryngology department at 2 months of age for evaluation of a huge lump in the left supraclavicular space.

The lump was first noticed by the parents when the infant was 1 month old. It gradually increased in size without causing dysphagia, respiratory difficulties, or neck motion limitation. Body temperature was normal. At presentation, the lump measured 10 x 5 x 5 cm. It was firm, did not transilluminate, and was not moveable over the underlying tissues. The overlying skin was normal. Imaging studies (Figures 1 and 2) showed a sharply circumscribed mass.

Consequently, excision surgery was scheduled. At surgery, a highly vascular mass with extremely large

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veins running over its surface was seen. The mass was readily separated from the neighboring structures. Removal of the internal jugular vein was required. The thoracic duct was identified at the base of the neck; it was left intact but was tucked into the surrounding tissue with several Vicryl stitches. A multiple suction drain (Redon Jost type) was inserted. Histology showed a hemangiopericytoma.

Figure 1: Computed tomography with contrast injection, axial section: large heterogeneous mass in the left side of the neck with a highly vascularized lateral and posterior portion.

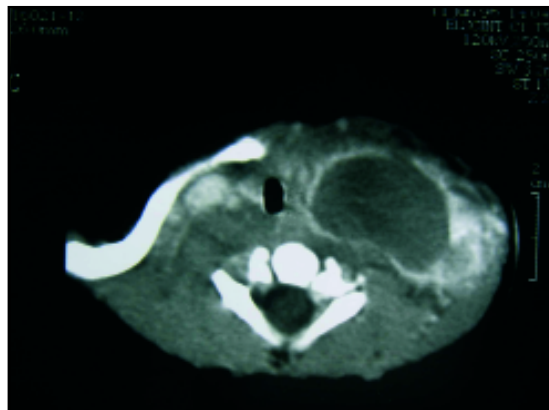
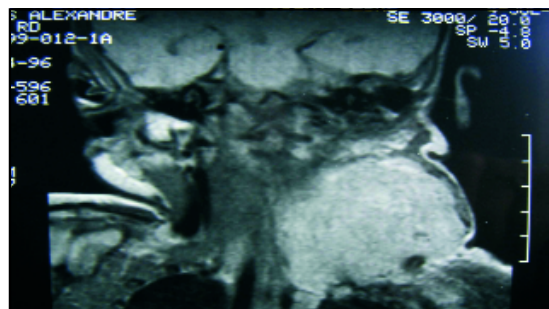


Figure 2: Magnetic resonance imaging, T2-weighted sequence, first echo, coronal section: the extent of the mass on the vertical axis is well visualized.



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On the first postoperative day (D1), the drainage fluid was milky. Breathing was normal, as were findings from a chest radiograph. The skin was normal, with no evidence of inflammation. The drain was clamped and a compression bandage was placed over the supraclavicular space. Breast-feeding was discontinued and the patient was given a milk formula free of long-chain fatty acids throughout the hospital stay. On D2, there was no swelling in the supraclavicular space, and the drain was removed. The supraclavicular space became somewhat boggy during the next few days, but the swelling was not severe enough to warrant aspiration. The patient was discharged on D9 with no bandage or dietary restrictions. The subsequent course was uneventful. Follow-up is now 6 years.

DISCUSSION

The thoracic duct empties either into the lower part of the left internal jugular vein or into the left supraclavicular vein. The site of the inlet to the venous system varies across individuals, in addition, there may be more than one inlet [1].

Injury to the thoracic duct can occur during lower neck dissection performed for any reason. The more difficult the dissection, the greater the risk. Dissection of large congenital cervicofacial lymphangiomas is extremely difficult in infants and therefore carries a high risk of thoracic duct injury. In addition, the wall is thin, similar to the thoracic duct wall; however, fluid issuing from a lymphangioma is clear, whereas fluid from the thoracic duct is usually somewhat milky.

Conceivably, the Redon Jost drain may have led to secondary thoracic duct injury in our patient. This drain is fairly stiff and may erode the thin wall of the thoracic duct. Suction through the drain may constitute a further source of injury. A better drainage option may be a flexible sheet drain (Delbet type), although this leaves a larger scar than the Redon Jost drain.

Thoracic duct injury can result in chylothorax [2], lymph leakage into suction drains [3-4], or lymphocele [5-7]. Lymphocele is a delayed complication, as it develops only after skin wound healing. Most reported cases occurred in adults.

The diagnosis is readily established when aspiration [5-6] or drainage (our patient) recovers milky fluid. When the diagnosis is in doubt, the fluid can be subjected to biochemical tests, which show far higher cholesterol and triglyceride levels than in the serum.

Imaging studies should be obtained to check that the lymphocele does not extend into the thoracic cavity [6,8]. Decreasing the production of lymph is the first step in the treatment of lymphocele. The average adult produces 2 to 4 l of lymph per day. Eliminating long-chain triglycerides from the diet decreases lymph production [2-4,8]. In neonates and infants, breast milk or regular formula must be discontinued and a formula free of long-chain triglycerides used instead [2].

The second step is compression of the supraclavicular space [5,8]. In our patient, dietary treatment and local compression were sufficient to stop the leakage of lymphatic fluid, and aspiration was not required. When these two measures fail, sclerosing injections have been used in adults but not in the pediatric population [7]. Patients with persistent lymph leakage after 2 to 3 weeks should receive total parenteral nutrition and undergo surgery to repair the thoracic duct injury. However, the site of the injury may be extremely difficult to identify. When the injury cannot be identified, the usual site of thoracic duct-vein junction should be sealed off with a muscle flap and biological glue [5-6].

CONCLUSION

Lymphocele may be easier to manage in young infants than in adults, as full compliance with a diet free of long-chain triglycerides is readily achieved. Major treatments should be reserved for patients who fail to respond to dietary treatment and local compression.

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