

Traumatic Lymphocele Following Blunt Injury: A Case Report

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Citation

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Abstract

Lymphocele(Lymphocyst) is rare. Most of the cases reported in the literature are following surgical intervention. Lymphoceles following saphenous vein harvest, renal transplant, groin dissection for lymphadenectomy or radical hysterectomies are well known. Post traumatic Lymphocele in the groin region is extremely rare. To the best of our knowledge with extensive research of the literature, we could find only three published cases so far. Out of these three cases, only one case was reported following blunt injury to the groin during war.

Our case will be second in the series of blunt injury to the thigh.

CASE REPORT

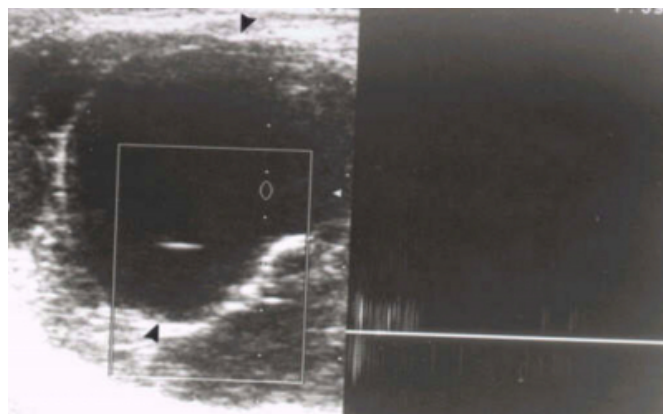
A 37 yrs old male Chinese construction worker presented with a painful lump in the medial aspect of left thigh in sub-inguinal region. He was hurt by a sharp metallic object a week before over the medial aspect of left upper thigh. On the third day of injury, he noticed a small nodular swelling at the trauma site which increased to the size of a lemon during the next four days.

On examination, the swelling was localised to left sub-inguinal region at the site of injury and measured about 6x4 cm in dimension. The lump was soft to firm, non-pulsatile with positive trans-illumination. No other remarkable findings were observed.

Duplex doppler sonography showed a non vascular cystic mass of about 9x3 cm size in the left sub-inguinal region (Figure 1).

Figure 1

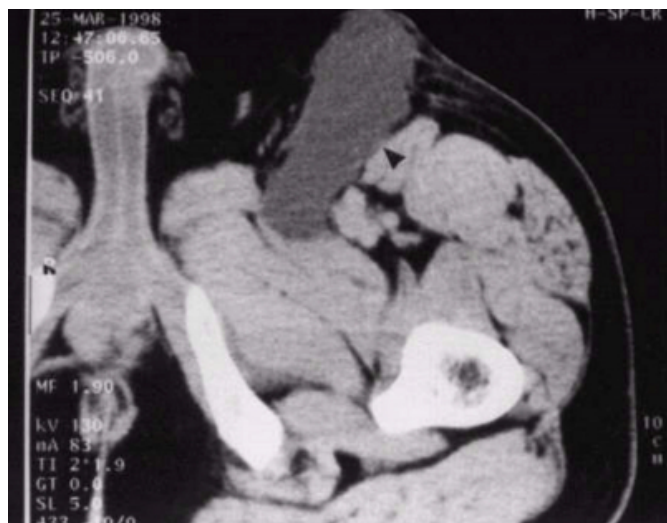
Figure 1: Duplex Doppler sonography shows an anechoic nonvascular lesion(Arrow heads) at medial aspect of left upper thigh.



Post IV contrast CT showed a non enhancing well-defined oblong shaped mass with water attenuation in the left sub-inguinal area . Minimal displacement of adjacent femoral vessels with some compression of the adjacent sartorius muscle demonstrated (Figure 2).

Figure 2

Figure 2: CT shows an oblong shaped non enhancing mass lesion of about 9x3 cm size compressing the adjacent sartorius muscle (Arrow head) and postero-lateral displacement of femoral vessels.



10 ml. serous straw coloured fluid was aspirated under ultrasound guidance. The fluid was sterile. Biochemical analysis showed protein 6.4 gm/l, Cholesterol 0.83 mmol/l and triglycerides 0.31mmol/l. The blood serum protein was 7.5 gm/l. The predominant cell type was lymphocyte as opposed to neutrophil with cell cytology. This suggests that the fluid was lymph caused by damaged lymphatic vessels rather than serum. Therefore, the findings were consistent with lymphatic fluid.

Surgical intervention with incision and drainage was performed. Eight months follow up was unremarkable with no evidence of recurrence.

DISCUSSION

The Lymphocyst (Lymphocele) was first described by Mori in 1955¹. He analysed a large series of radical hysterectomy patients. He called these collections “Lymphocysts”, a term that was used until the 1970s.

A lymphocele is a lymph-filled space without a distinct epithelial lining². Lymphoceles are commonly seen following surgical procedures in which large amounts of lymphatic tissue are transacted. Once injured, a lymphatic

vessel is quite susceptible to continued leakage. Lymph contains a low concentration of clotting factors and has no platelets. Lymphatic vessels are devoid of smooth muscle and therefore lack any constrictive properties³.

A Lymphocele following a blunt injury to thigh is an extremely rare entity. Only three cases have been reported in literature. The first case presented after 12 hrs of application of lower limb tourniquet for knee arthroscopy⁴. Germon published a case following pelvic fracture with crush injury which presented with swelling after a year⁵. Chaloner's patient had lymphocele following blunt war injury. His patient had received a blow from a rifle butt and presented with swelling in the thigh after about 10 weeks of trauma⁶.

The diagnosis of lymphocele is straightforward once the differential has been considered. A computed tomography (CT) scan or an ultrasound examination of the area of interest will confirm the presence and location of fluid collection.

Lymphoceles generally appear cystic but internal echoes and septations may present. Any such collections should be aspirated under radiographic guidance. The fluid should be checked for creatinine, protein, cholesterol, Triglycerides, cell count, Gram stain and culture.

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References

1. Mori N. clinical and experimental studies on the so called lymphocyst which develops after radical hysterectomy in cancer of the uterine cervix. J. Jap.Obstet.Gynecol. Soc. 1955;2: 178-203.
2. Basinger GT and Gittes RF. Lymphocyst: Ultrasound diagnosis and Urologic management. J.Urol. 1975;114:740-745
3. Chrobak L,Bartos V,Brzek V and Hnizdova D: Coagulation properties of thoracic duct lymph. Am J Med Sci: 1967 253:69-75.
4. Owen TD and Ameen MI. Lymphocele of the thigh: a complication following tourniquet application in arthroscopy. Injury 1993;24(6)421-422
5. Germon TJ,Clarke NMP,Watt I; Post traumatic lymphocele. Injury 1994;25(1):65-66
6. Chaloner E.J,Crozier J.A., lymphocele of the thigh following blunt war injury. Injury 1995;26(10): 693-694

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