CASE REPORT

Management of postoperative lymphocele with polidocanol sclerotherapy in carcinoma vulva patient after bilateral groin dissection

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A B S T R A C T

Background: Lymphocele is defined as extraperitoneal collection of lymph covered with a fibromembranous wall without any epithelial lining. Although there are several treatment modalities which includes surgical approach and percutaneous techniques through interventional radiology and sclerotherapy but till now no consensus has been made on the best treatment for postoperative lymphocele. Case report: We are reporting a case of postoperative lymphocele on left inguinal region after the radical vulvectomy and bilateral complete inguinal node dissection in moderately differentiated squamous cell carcinoma patient stage T1bN0M0. She was treated with polidocanol sclerotherapy after the failure of negative suction drain, compression bandage, aspiration and tetracycline sclerotherapy. Conclusion: Polidocanol shows an instant effect over lymph collection and gives a good result.

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1. Introduction

Lymphocele was first reported in 1950 by Kobayashi and Inoue [1] which is defined as extraperitoneal collection of lymph covered with a fibromembranous wall without any epithelial lining [2–4].

Polidocanol, a sclerosing agent induces a chemical inflammation resulting from protein denaturation and causes fibrosis. It is very well established for varicose veins treatment. Polidocanol foam sclerotherapy is also an effective, easy to use, cheap and well-tolerated new treatment for patients with postoperative lymphoceles [5]. We are reporting a case of postoperative lymphocele managed with injection polidocanol, applied through drain tubing.

2. Case report

A 70-year-old female, non-diabetic, non-tobacco-chewer patient (body mass index-31) was diagnosed as moderately differentiated squamous cell carcinoma vulva, stage T1bN0M0. She was a known case of hypertension and was on medications (telmisartan 40 mg and amlo-lipidine 5 mg). There was no history of previous procedures on this site.

Radical vulvectomy with bilateral inguinal node dissection via three incisions technique was done under general anesthesia. Sartorius vein was not preserved and lymph vessels were not tied during the surgery. Sartorius transposition was done over femoral vessels.

Negative suction drains were kept on both inguinal regions postoperatively. No perioperative complication was seen. Total numbers of lymph nodes removed were 16 and 12 on right and left side respectively and metastasis was not found in any of the nodes.

Fondaparinux two and half mg was used subcutaneous for prophylaxis of deep vein thrombosis during postoperative period from days 1 to 7. Pattern of drain output and seroma aspiration is shown in (Figs 1–3).

After going through the literature, we came to know about the retrospective study done by Klode J et al [5] which concludes that lymphorrhea resolved much quicker (P < 0.0001) in patients treated with polidocanol foam sclerotherapy. So on 44th day, we injected polidocanol [30 mg (two ml) diluted in 8 ml of normal saline] locally and compression bandage was applied for 2 hours. Thereafter negative suction was applied again and all the solution was aspirated. This reduces the drain amount from 300 to 110 ml in 4 days so we repeated this again on 48th day. There is no recurrence of lymphocele during the 6 months of follow-up and patient is doing well with no complication noted during or after sclerotherapy except usual lymphedema which occurs in most of patients after bilateral groin dissection which is comparable in both the limbs in the patient.

3. Discussion

Disruption of the lymphatic vessels during surgery may result into lymphocutaneous fistula or lymphoceles postoperatively. They are reported in up to 30% of patients [6,7] following lymph node dissection and are usually asymptomatic and regresses spontaneously [5] and need intervention in only in 28.9% of patients after complete regional lymph node dissection [8]. It can be a potentially serious complication if not taken care of judiciously and may lead to pain, secondary infection or compression of blood vessels such as the...
inguinal vessels, resulting in venous stasis, thrombosis and lower extremity edema [6,9] in approximately 5 to 7% of patients.

Scarring from previous procedures, presence of foreign material and comorbid factors, such as hypertension, diabetes and tobacco abuse, older age, advanced clinical stage and obesity, etc. are some of the risk factors [10]. Although the risk factors are not clearly defined, some surgical measurements like laparoscopic approach, ligating the lymph vessels, avoiding peritoneal juxtaposing at the end of the procedure [11], and precluding suction drainage tube placement [12] may have a potential impact at decreasing the incidence of lymphoceles.

There are several treatment modalities which include surgical approach and percutaneous techniques through interventional radiology and sclerotherapy but till now no consensus has been made on the best treatment for postoperative lymphoceles.

Although, surgical intervention has previously been described as the treatment of choice, it carries more risk, greater morbidity, longer hospitalization and higher cost than percutaneous therapy. Similarly irradiation of inguinal lymphoceles is effective but has serious side effects. Long hospitalization, relative high risk of infection, and a high recurrence rate (up to 25%) are major drawbacks [3] of external drainage technique [13].

Minimal invasive percutaneous therapies have emerged as first line therapies for lymphocele leaving surgical treatment for second-line therapeutic [4]. Primary aspiration has not been found to be an effective therapy and should be performed only in small lymphoceles, because of the high risk of recurrence (80–90%) and infection (25%) [3,14]. Percutaneous catheter drainage has a variable success rate of 70 to 100% [15–19]. A number of sclerosing agents with some pros and cons have been used for sclerotherapy. Sclerosants like alcohol, povidone iodine and bleomycin require multiple sessions and the later also has serious potential side-effects, such as necrosis. Although the doxycycline and tetracycline are effective and inexpensive they are recommended in asymptomatic patients only after the drain has decreased to 30 ml/day. The use of fibrin sealant had been proved to be effective but, it is too expensive for general use. Talc, ampicillin and Polidocanol etcetera, are some other examples of sclerosants. Because of scarcity of scientific evidence of superiority of any sclerosing...
agents over another, their selection depends on personal preferences and experience of the treating surgeon [3,4,19,20].

Polidocanol is a nonsteroidal local anesthetic and has been used as a sclerosant which is painless upon injection. It does not harm intact vascular linings and have action only on damaged intima. After the application of the vessels needs to be pressed together with the compression bandage to have optimum effect. Extravasation does not cause tissue necrosis and is very safe. Although a few cases of anaphylaxis have been reported, it has a very low incidence of allergic reactions. Also, in some patients, it may produce hyperpigmentation [21]. Intra-arterial application is contraindicated.

Conclusion

Polidocanol shows an instant effect over lymph collection and gives a good result. This case report is just an effort to attract the attention toward this sclerosing agent which has not been studied so much despite of promising results.

References