CASE REPORT

Lymphangioma of the breast

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Accepted 24 February 2014

SUMMARY

A 23-year-old lactating woman presented with a swelling in the retroareolar region of the right breast. Ultrasound and MRI of the breast were suggestive of lymphangioma of the breast. She underwent complete excision of the lesion after 3 months of stopping lactation. This article aims to highlight one of the rare lesions in the breast. Surgery is the treatment of choice.

BACKGROUND

This is a case of lymphangioma of the breast, which is a rare entity in breast with only a few cases being reported so far.

We would like to highlight the fact that if the patient is lactating it is desirable to operate a few months after stopping lactation in order to avoid the complication of formation of milk fistula.

CASE PRESENTATION

A 23-year-old woman noticed a swelling under the areola of the right breast, 2 months following delivery, 12 months prior. The swelling had gradually increased in size to attain twice its original size. There was no pain or symptoms of inflammation. She was breast feeding her baby.

On examination ([figure 1](#)) a diffuse swelling was seen in the lower half of the areolar region extending for 2 cm beyond areola. The nipple appeared to be pushed upwards and outwards. The swelling was soft in consistency and compressible. It was brilliantly transilluminant. A clinical diagnosis of lymphangioma of the breast with a differential diagnosis of haemangioma was made.

INVESTIGATIONS

Ultrasound of the breast revealed a cystic lesion measuring 6×6×7 cm in the right breast. MRI of the breast ([figure 2](#)) revealed an enhancing cystic lesion. It measured 6.5 cm transversely, 6.5 cm anteroposteriorly and 6.9 cm superoinferiorly in the greatest dimensions. The lesion had irregular margins and multiple thin septae and was located predominantly in the subcutaneous plane in the retroareolar region, in the inferior and medial portion of the right breast. MRI diagnosis of a lymphangioma of the right breast was made.

TREATMENT

Since the patient was lactating, she was planned for surgery after a period of 3 months after stoppage of lactation. This was to avoid possibility of formation of milk fistula, or wound infection in the post-operative period.

Figure 1 Clinical examination of the right breast showing retroareolar swelling.

Following stoppage of lactation, she was posted for excision of the lymphangioma.

Circumareolar incision was placed from 3 o'clock to 9 o'clock. Flaps were raised. The lymphangioma ([figure 3](#)) was excised by laying open the breast tissue, in order to excise the deeper extension. The lymphangioma was excised completely. Skin flaps were closed after placing a suction drain.

Histopathology of the specimen confirmed the diagnosis of a cavernous lymphangioma.

OUTCOME AND FOLLOW-UP

Postoperative period was uneventful. Sutures were removed on the 12th postoperative day.

She has been on regular follow-up and until there has been no evidence of recurrence at 3 months postsurgery.

DISCUSSION

Lymphangiomas are benign lymphatic tumours which are developmental in origin and so are common in children, with 90% of the cases presenting in the second decade of life. Lymphangiomas typically consist of dilated lymph channels lined by endothelium. This may be due blockage of the lymphatic channels with secondary dilation, congenital weakness of the lymphatic wall or proliferation of lymphatic vessels. Subsequently these lesions enlarge over time by the collection of fluid. These cystic spaces in turn communicate with large dermal lymphatics and subepidermal vesicles, but not with the regional lymphatic system.¹

Lymphangiomas can be classified into simple, cystic and cavernous. Simple lymphangiomas consist of small capillary-sized, thin-walled vessels with considerable connective tissue. Cystic lymphangiomas are characterised well-defined cyst such

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To cite: Hiremath B, Binu V. *BMJ Case Rep* Published online: [please include Day Month Year] doi:10.1136/bcr-2014-203937

Figure 2 MRI of the breast showing enhancing cystic lesion in the right breast.

as spaces lined by endothelial cells and are filled with clear lymph fluid. Finally cavernous lymphangiomas are composed of dilated lymphatic channels in a lymphatic stroma containing lymphoid aggregates.¹

Lymphatics from the adult mammary gland originate from interlobular connective tissue and walls of the mammary ducts and communicate with cutaneous lymphatic plexuses around the nipple, the subareolar plexus and finally pass to the axillary nodes.² Lymphangiomas of the breast usually occur in the upper outer quadrant, the tail of Spence or in the subareolar space.^{2–8} These tumours are often seen in the areas of the jugular buds in the neck. Other areas include the axilla, shoulder and the groin.⁹

Lymphangiomas of the breast are rare with only a few cases being reported so far. The differential diagnoses to be considered include simple cysts and fibrocystic disease, lymphocele, haematoma and haemangioma.^{10–11}

Imaging forms an integral part in arriving at a diagnosis. Ultrasound is useful in young women with dense breasts and helps to differentiate solid from cystic masses.¹²

MRI facilitates in assessing the depth and extent of the tumour thereby helping therapy.¹³ Confirmatory diagnosis of lymphangioma is made on the basis of histopathology.

Lymphangiomas are treated mainly for cosmetic and functional reasons. Failure to treat may result in secondary complications such as infection and haemorrhage. Malignant degeneration into squamous cell carcinoma,¹² in long-standing cases has been reported.

Figure 3 Intraoperative picture showing cob web appearance of the lymphangioma of the right breast.

Treatment of choice depends on depth and location of the lesion along with regard to the patient's age and general health. Wide surgical excision of the cysts facilitated by MRI is the most effective treatment modality and remains the standard of care. Steroid injections and sclerosants cause sclerosis of the tissue and decrease the size of the lesion. Carbon dioxide laser can yield functionally and cosmetically acceptable results by vaporising some of the surface lymphatic vessels.¹⁴ Streptococcal lysin (OK-432), a biological response modifier, induces local inflammatory cytokines that increase endothelial cell permeability, lymph drainage and flow leading to shrinkage of the cystic spaces,¹⁵ but all these are associated with high recurrence¹⁶ rates and moreover subsequent surgery becomes technically difficult owing to sclerosed tissue. Hence they are used as adjuvants to surgery. For poor surgical candidates, radiotherapy is the option considered.

Learning points

- ▶ Lymphangioma of the breast is an extremely rare entity.
- ▶ An accurate diagnosis can be made clinically and is further confirmed best by MRI.
- ▶ It is best to avoid elective surgery in a lactating breast.
- ▶ Surgery is the treatment of choice for lymphangioma of the breast.

Contributors BH worked up and operated on the case. VB assisted BH and compiled the case report with the help of BH.

Competing interests None.

Patient consent Obtained.

Provenance and peer review Not commissioned; externally peer reviewed.

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