CASE REPORT

An Unusual Presentation of a Breast Lump

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Abstract Trichilemmal cyst also known as pilar cyst is a rare cyst arising from the external root sheath of the hair follicle. These cysts are observed on the scalp most commonly in females. The occurrence of trichilemmal cysts in areas other than the scalp is extremely rare. We report a case of an 80-year-old female with trichilemmal cyst of the breast which was first misdiagnosed as a sebaceous cyst because of the unusual disease site and our unfamiliarity with the disease. The patient underwent excision of cyst along with the cyst wall and histopathological diagnosis was trichilemmal cyst of the breast. A review of literature shows that trichilemmal cyst of the breast is an extremely rare condition which accounts for 0.1 % of the skin biopsies reported till to date. We report a case of trichilemmal cyst of the breast with relevant discussion on trichilemmal cysts.

Keywords Trichilemmal cyst · Pilar cyst · Breast · Scalp

Introduction

Trichilemmal cysts of the breast are one of the rarest types of breast cysts [1]. These are slow-growing cysts derived from the external root sheath of the hair follicle which are present all over the body [1]. They arise most commonly in elderly women on the scalp [1]. Trichilemmal cysts of breast are very rare accounting for 0.1 % of the skin biopsies [2]. History and

clinical examination do not play a significant role in diagnosing trichilemmal cyst of breast as most patients will present with a painless lump unless infected. Histopathological examination plays a significant role in diagnosing the condition. Due to the rarity of the condition, it is commonly diagnosed as a sebaceous cyst of the breast and an accurate diagnosis can only be made based on histopathological examination. The treatment as of now is en toto excision of the cyst, and recurrence rate after excision is not known on account of its rarity.

Case Report

An 80-year-old female presented with an otherwise asymptomatic lump in her left breast, which was of insidious onset and grew slowly over a period of 4 years. On local examination of the breast, there was a lump in the upper and lower outer quadrant of the left breast measuring 15 × 20 cm which was cystic in consistency and had ill-defined borders; no regional lymphadenopathy was noted. Mammogram of the left breast reported as BIRADS-2 (Fig. 1). Ultrasound guided fine-needle aspiration (FNAC), was inconclusive, and a histopathological correlation for definitive diagnosis was advised. Mammogram of right breast was normal. The breast lump was excised along with the cyst wall under local anaesthesia, and the specimen was sent for histopathological examination. Grossly, the specimen was membranous grey brown tissue masses, cut surface shows pultaceous material. Microscopically, multiple sections showed cyst wall lined by skin tissue with abrupt keratinization and subepithelial tissue with extensive haemorrhage (Fig. 2). Histopathology was trichilemmal cyst of breast. A final diagnosis of trichilemmal cyst of breast was made and post-operative period was uneventful. The patient was followed up for 2 years on a 6-monthly basis. The patient is doing well with no evidence of

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Fig. 1 On mammogram a well-defined radio-opaque cystic lesion measuring 22×16 cm in the upper outer, lower outer and upper inner quadrant of the left breast, reported as BIRADS 2

recurrence. A post-operative ultrasound done at a sixth monthly interval was normal.

Discussion Trichilemmal cyst was originally described in 1966 by Wilson-Jones [3]. It is also known as pilar cyst, arising from the external root sheath of the hair follicle [3]. Occurrence of trichilemmal cyst in the breast is a rare entity. The cyst preferentially arises in areas of dense hair follicle concentrations, and about 90 % of cases occur on the scalp [2, 4] with the residual 10 % occurring mainly on the back [4, 5]. Other less common locations include the vulva, nose, mons pubis, buttock, wrist, chest, breast, upper eyelid, dorsum of hand, arm, shin and elbow [5]. Women are affected in more than 80 % of cases, and the average age of patients is 65 years [5]. Trichilemmal cysts are infrequent and account for 0.1 %

Fig. 2 Microscopically, multiple sections show cyst wall lined by skin tissue with abrupt keratinization and subepithelial tissue with extensive haemorrhage

of the skin biopsies [2, 6, 7]. Lanugo hair follicles of the bald scalp and follicles of other areas devoid of non-terminal hair are unlikely to produce these cysts [1]. Therefore, trichilemmal cysts are not seen in the bald scalp, being more common in areas with excess hair growth [3, 6]. They are also known as trichilemmomas or invasive hair matrix tumours [1, 5]. Accurate diagnosis is made by histopathological examination which shows the presence of clear cells that exhibit marked pleomorphism, and atypical mitosis of the lesion near its origin from the outer root sheath of hair characteristically shows nodular trabecular formation of keratinocytes with a sharp border between parenchyma and stroma [7, 8]. The most characteristic histological feature is trichilemmal keratinization [5, 8].

Conclusion

Trichilemmal cyst of breast is a condition which exhibits features similar to a sebaceous cyst of the breast. Definitive diagnosis can only be made with the help of histopathology. Long-standing trichilemmal cysts have a propensity to become malignant which are known as malignant proliferative trichilemmal tumours (MPTTs). As of now, the treatment modality is excision of the cyst and recurrence rate is still unknown as only a few cases have been reported till to date. To conclude, cystic lesions of the breast are commonly benign. The incidence of prediction of cystic lesions of the breast in post-menopausal females being malignant is 0.5 to 2 % of all breast tumours. The chances of cystic lesions to be malignant is rare, however one must keep in mind that a trichilemmal cyst has a propensity to become malignant with a local and distant spread. Cystic lesions of the breast are not frequent in post-menopausal women and cystic lesions of the breast developing at this age should be viewed with suspicion.

Compliance with Ethical Standards

Conflict of Interest The authors declare that they have no conflict of interest.

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