# Chondrolipoma of the Breast: A Case Report

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## ABSTRACT

Chondrolipoma of the breast is a rare mesenchymal tumour of unclear histogenesis. In this report, we present a case in an elderly female highlighting the clinical features, gross and microscopic findings and a review of the literature.

*KEY WORDS: Breast, Chondrolipoma*

## Introduction

Lipomas constitute the commonest soft tissue tumour of adulthood, appearing most frequently in persons over 40 years of age and affecting both sexes with an almost equal frequency.[1] The breast though a relatively common site of lipoma[2] is a rare site of occurrence of its histologic variants such as chondrolipoma.[3]

### *Case Report*

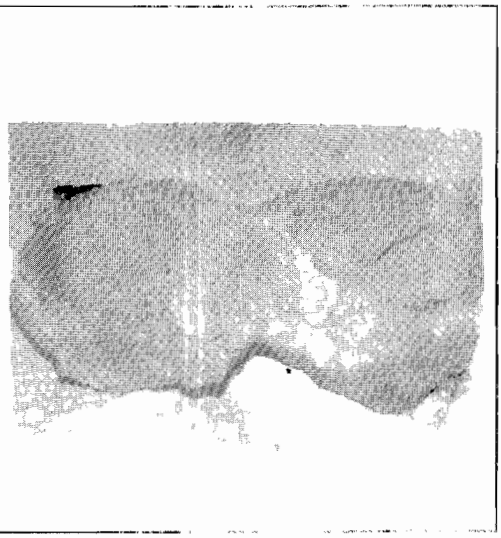
A 58 year old woman presented with a ten year history of a progressively increasing right breast mass. The mass was painless and not associated with nipple discharge, ulceration or history of trauma. She was married with five children and was 15 years postmenopausal. There was no family history of breast disease. On examination, she was obese with a massively enlarged right breast mass involving the upper and lower outer quadrants, and measuring about 20cm x 20cm. The mass was soft, fluctuant, relatively mobile and non-tender with a lobulated surface. No skin changes were noted, there was no fixation to the underlying structures and the chest wall. The regional lymph nodes were not palpably enlarged.

An impression of lipoma of the breast was made, which was further strengthened by a fine needle aspiration biopsy (FNAB) which gave an empty sensation on aspiration and smears of multiple aspirates showed only normal adipocytes, consistent with a lipoma.

At surgery, the mass was found to be well encapsulated and hence

ompletely enucleated. The gross pecimen was thinly encapsulated, ellow, lobulated and weighed 1, 630g. he cut section was gritty and showed a omogenous fatty surface with neccentric osteo-cartilaginous deposit igure 1).

*igure 1: Chondrolipoma. Surface is lomogenous Yellow and Fatty with ccentric Osteocartilagenous Deposit rrow)*



istology showed islands of adipocytes ith nodules of mature cartilage and one. The patient did well post peratively and has not shown any vidence of recurrence one year later.

## iscussion

he occurrence of cartilage or bone in ssociation with benign neoplasms of he breast is rare and has been ariously named chondroma [4] Chondrometaplasia, [5] benign chondrolipomatous tumour [3,5,6] chondrolipoma, [7] chondromyolipoma [8] and benign mescenchymoma [9], reflecting the heterogenous nature of the components of these lesions. Hence, these tumours while being regarded by some authors [10] as hamartomas rather than neoplasms, are considered by others to be mixed tumours likened to pleomorphic adenomas and chondroid syringomas of salivary and sweat glands respectively.[5] It is pertinent to note however that pure chondrolipoma. such as in this report lack an epithelial component similar to the report of Dharkar and Kraft [5] and this is an evidence against its classification as a Mixed tumour.

More puzzling is the histogenesis of the cartilage and bone present in these liponas. Whether like some primary osteoscarcomas of the breast they arise from pre-existing fibroadenomas or Phyllodes tumour [11] or the suggestion that they may arise from metaplastic epithelial cells or from direct transformation of tumour epithelium are unlikely to explain the histogenesis of chondrolipoma which is composed of only stromal components without epithelium. In our case, stromal metaplasia may be the origin of the bone and cartilage just as in the osteogenic sarcomas of the breast reported by Jenstrom et al [12] and Oberman [13]. The possibility of derivation from pluripotential stromal cells, is another theory; [5, 9] The stromal stem cells being possibly stimulated to differentiate along osteocartilagnous lines by bone morphogenetic proteins (BMPS) which are members of the transforming growth factor alpha super family. [14]

The duration of the lipoma does

not appear to influence the development of the osteocartilaginous components as chondrolipomas excised from two months, up to 10 years after their appearance as in this case have all shown osteocartilaginous foci. Thus the duration of the tumour mainly determines its size as in our patient compared to the smaller 2 x 1cm tumour reported by Dharkar.[5]

## References


1. Ashley DJB ( ed). Tumours of Adipose tissue. In: Evans histological appearance of tumours. Churchill Livingstone, Edinburgh 1978, pp 54-65.
2. Ahmed A (ed). Miscellaneous entities. In: Diagnostic breast pathology. A text and colour Atlas. Churchill Livingstone, Edinburgh, 1992, pp 133-143.
3. Kaplan L, Walts E. Benign Chondrolipomatous tumour of the female breast. Arch Pathol Lab Med 1977; 101: 149-151.
4. Koischowitz D, Helpap B. Benign chondrolipomatous tumours of the breast. Fortschr Geb Roentgenstr Nuklearmed 1976; 125:190 191
5. Dharkar DD, Kraft JR Benign chondrolipimatous tumour of the breast. Postgrad Med J 1981; 57:129-131.
6. Lugo M. Reyes JM, Putong PB Benign chondrolipomatous tumours of the breast. Arch Pathol Lab Med 1982; 101: 691:692.
7. Marsh WL, Lucas JG, Olsen J Chondrolipoma of the breast. Arch Pathol Lab Med 1989; 113:369-371
8. Tavassoli FA (Ed). Mescenchyma lesions. In: Pathology of the breast Appleton & Large, Connecticu 1992, pp 517-563.
9. Benisch B, Person P, Sarno J Benign mesenchymoma of the breast. Mount Sinai J Med 1976 43:530.
10. Rosai J (ed). The Breast. In Ackerman's surgical pathology Mosby, Missouri, 1989, pp 1193 - 1267
11. Ahmed A (ed.) Breast sarcomas: In Diagnostic breast pathology. A tex and colour Atlas, Churchil Livingstone, Edinbirgh, 1992 pp127 132.
12. Jenstron P, Lindberg AL, Melanc DN Osteogenic sarcoma of the mammary gland Am J Clin Patho 1963, 40:521.
13. Oberman HA. Sarcomas of the breast. Cancer 1965; 18:1233.