

Extraskelatal Chondroma of the Fallopian Tube

Extraskelatal chondroma can occur in the hands, feet, head and neck. This tumor usually presents as a small solitary nodule. The histogenesis of the tumor is controversial, but some have suggested a metaplastic origin. Chondroma of the fallopian tube is very rare. There is only one report in English literature. The origin of this tumor can be subcoelomic mesenchyme of the tubal serosa or mesenchyme of the myosalpinx. We describe a case of chondroma arising from the serosal surface of the fallopian tube with a review of literature. A 30-yr-old woman visited hospital due to left adnexal mass. On operating finding, 2 × 3 cm sized nodular mass was noted on the left tubal serosal area. The excised mass showed multilobulated appearance covered with thin fibrous membrane. The cut surface was solid, grayish yellow, and myxoid with a focal gelatinous area. The microscopic finding showed islands and elongated lobules of mature benign cartilage without cytologic atypia.

Key Words : Chondroma; Fallopian tubes; Mesoderm

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INTRODUCTION

Extraskelatal chondroma is a small and usually well-defined nodule of cartilage that is not attached to bone. It has distinct features from other lesions containing cartilage, such as lipomas with metaplastic cartilage, cartilage associated with synovial chondromatosis, and cartilage found in myositis ossificans. It constitutes approximately 1.5% of benign soft tissue tumors. Patients ranged in age from less than one year to 85 yr or older, but it usually occurs in the thirties or forties. The most common affected sites are the hands and feet. Patients usually have a growing soft tissue mass. It is typically well demarcated and lobulated, rarely exceeding 2 cm in its greatest dimension (1). The mass may be firmly attached to tendons or to the tendon sheath, joint capsule, and periosteum. Rare sites such as the testis and liver also have been documented (2, 3).

This report presents an extraskelatal chondroma arising in the fallopian tube of a 30-yr-old woman. To our knowledge there has been only one previous report of a chondroma at this site (4).

CASE REPORT

A 30-yr-old female presented with a left adnexal mass that was identified during a routine gynecologic examination. There were no gynecologic symptoms, and the physical examination revealed no remarkable findings. The plain pelvic radiograph showed a calcified well-defined mass at the left

adnexal area (Fig. 1). The ultrasonogram of the pelvis showed multilobulated echogenic mass in the left fallopian tube area. Under an assumption of a benign adnexal mass, a laparoscopic mass enucleation was performed. During the operation, a 3 × 2 cm-sized, hard and nodular mass was noted on the left tubal serosal area. It had a good demarcation from the serosal surface.

The excised mass was multilobulated and covered with a thin fibrous membrane, measuring 3 × 3 × 1.5 cm. The mass was elastic and soft with focal hardness. The cut surface was solid, grayish yellow, and myxoid with a focal gelatinous area. Upon microscopic examination, the mass was totally surrounded by a fibrous or collagenous capsule with variable thickness. It was composed of islands and elongated lobules of mature benign cartilage with fibrotic and well vascularized stroma. The cartilage consisted of bland appearing chondrocytes having well formed lacunae (Fig. 2A). There was no severe cytologic atypia, mitosis or necrosis. Multifocal endochondral type calcification was present throughout the mass (Fig. 2B).

DISCUSSION

Extraskelatal or soft tissue chondromas are rare benign tumors that arise in tissue unrelated to the bone. These tumors are usually arisen in the hands or feet of middle-aged adults of either sex. Rare sites such as the testis, liver, and prostate have also been documented. Radiologically, these tumors show irregular soft tissue calcification without involvement

of underlying bone. The common pattern of calcification is curvilinear with ring like densities that outline the soft tissue lobules. Our case also demonstrated these radiologic appearances. Grossly, these tumors are well circumscribed, often encapsulated and have a glassy, myxoid or calcified cut surface. They are usually small, measuring less than 3 cm in diameter. On the light microscopic findings, most tumors are composed of mature hyaline cartilage, often showing foci



Fig. 1. The pelvic radiograph reveals well-defined ovoid mass with curvilinear calcification.

of dystrophic calcification or metaplastic ossification. Cellularity of the tumor is quite variable and chondrocytic lacunae also tend to vary in size. Sometimes, marked nuclear atypia, pleomorphism, binucleated or multinucleated lacunae are present. Stromal myxoid degeneration is occasionally found. The local recurrence rate is about 10-15% but there is no reported case of distant or local metastasis. One-third of soft tissue chondromas are characterized by the presence of immature chondroblasts (5). This type is more cellular than the usual ones and may have a greater tendency to recur locally after surgery. A xanthoma-like zone, a myxoid appearance, a fibrogenic and vascularized stroma, or a granuloma-like proliferation can also be seen. Our case presented the typical pattern of chondroma that is composed of islands and lobules of mature benign cartilage in the vascularized stroma. Multifocal endochondral-type calcification was also present.

The histogenesis of this tumor is still controversial. Some have suggested a synovium as the origin (6). However, the fact that many of the lesions arise in areas too distant from a synovium argues against this hypothesis, and metaplasia from undifferentiated mesenchymal cells provides an alternative explanation (7). It is likely that the tumor cells arise from uncommitted mesenchymal stem cells either by metaplastic or neoplastic processes. The cellular origin varies from site to site. In the tongue chondromas, it is felt that the lesion develops either from residual embryonal tissue in an area of fetal cartilage, or from pluripotential mesenchymal cells that undergo metaplasia and differentiate into cartilage as a result of some irritating stimulus (8). In the fallopian tube, Spanta and Lawrence (4) suggested mesenchyme of the myosalpinx or subcoelomic mesenchyme of the tubal serosa as the origin.

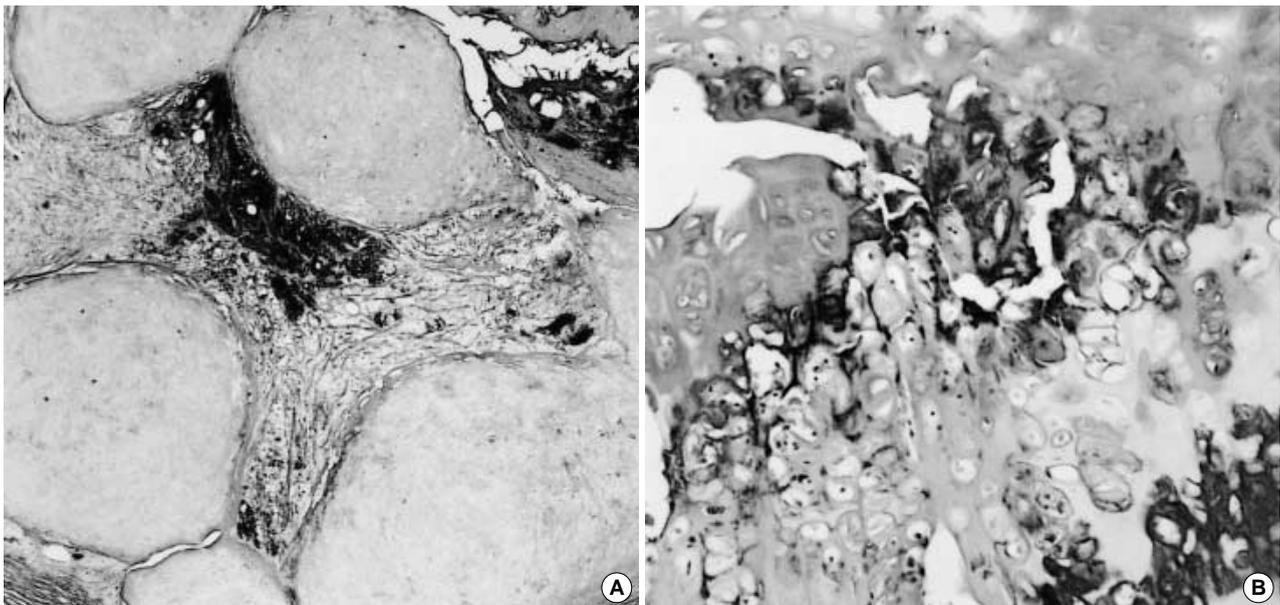


Fig. 2. (A) Islands and elongated lobules of mature benign cartilage with well vascularized benign stroma are present (H&E, $\times 40$). (B) Multifocal endochondral-type calcification is present throughout the mass (H&E, $\times 200$).

In this case, there was no connection between this tumor and myosalpinx and it seemed to arise in the serosal layer. Therefore, subcoelomic mesenchyme of the tubal serosa is more likely to be the origin.

The differential diagnosis includes well-differentiated extraskeletal chondrosarcoma, periosteal chondroma, extraskeletal myxoid chondrosarcoma, and mesenchymal chondrosarcoma. Well differentiated chondrosarcoma shows abnormal mitoses, atypism, and necrosis. Periosteal chondroma radiologically shows erosion or indentation of the underlying cortical bone with associated sclerosis. Extraskeletal myxoid chondrosarcoma and mesenchymal chondrosarcoma have distinct pathologic features and can be easily differentiated from soft tissue chondroma. Our case showed the typical pattern of chondroma without severe atypia or mitosis and was easily diagnosed as chondroma. Treatment of choice is local excision. Of importance, the tumor should be removed completely, due to the high recurrence rate of 10-15%. The tumor in our case was well encapsulated and completely excised. There was no evidence of recurrence for postoperative ten months.

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