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A case of ancient schwannoma of the great toe

Ayak başparmağında görülen eskimiş şıvanom

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Eskimiş (ancient) şıvanom, kalsifikasyon ve kistik dejenerasyon gösteren, dejenere nörilemmom olarak da tanımlanan, şıvanomun oldukça nadir bir türüdür. Kırk iki yaşında erkek hasta, sol ayak başparmağının taban tarafında sekiz yıldır var olan ve son altı aydır büyüme gösteren bir kitle yakınmasıyla başvurdu. Fizik muayenede sol ayak başparmağı dış yan yüzünde ve taban kısmında 3x2x2 cm boyutlarında bir kitle görüldü. Ayak radyografilerinde kemik yapılar normal görünümdeydi. Künt diseksiyon yapılarak tümör tümüyle çıkarıldı. Cerrahi sonrası dönemde herhangi bir sorun yaşanmadı. Çıkarılan materyalin histopatolojik inceleme sonucu eskimiş şıvanom olarak bildirildi.

Anahtar sözcükler: Ayak/patoloji; ayak hastalığı; nörilemmoma/cerrahi; yumuşak doku neoplazileri.

Ancient schwannoma (degenerated neurilemmoma) is a rare form of schwannoma characterized by calcification and cystic degeneration. A 42-year old patient presented with a mass in the base of the left great toe, which had existed for eight years and undergone significant enlargement for the past six months. On physical examination, there was a mass, 3x2x2 cm in size, in the lateral aspect and base of the left great toe. Radiographic appearance of the feet was normal. The mass was removed by blunt dissection. No postoperative problems were seen. The histopathological diagnosis of the specimen was made as ancient schwannoma.

Key words: Foot/pathology; foot diseases; neurilemmoma/surgery; soft tissue neoplasms.

Schwannoma, which originates from the schwann cells of endonorium, is a rarely malignant development showing tumor. Neurilemmoma is the benign form of schwannom which is encapsulated with perinorium. Ancient schwannoma, which also called as degenerated neurilemmoma, is a degeneratred form with calcification and cystic degeneration of schwannoma and is seen quite rarely. Ancient schwannoma may be seen at different parts of body.[1,2] We discussed here a case of ancient schwannoma seen at the great toe of the left foot.

Case report

A 42 year-old patient who had a complaint of a growing mass on his plantar aspect of left great toe, referred to our clinic. He noticed this as an induration approximately 8 years ago. Until to the last 6 months, the enlargement was painless and limited to a small size. By this time increase in the size and pain was significant. The tumor affected the patients walking during the last year. On physical examination a mass was bulging at the lateral plantar aspect of the left great toe approximately at a size of 3x2x2 cm (Figure 1 a-b). There was not any discoloration or ulceration of the overlying skin. By palpating, a hard and painful mass was detected. There were no fluctuation in the lesion. No loss of sensation or motor activity at the great toe was detected. The footwear of the patient was deformed at the site where the great toe corresponds.

The X-Ray roentgenogram of the right foot appeared to be normal. Laboratory results were also

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Figure 1. (a,b) Preoperative and **(c)** Postoperative view of the tumor.

normal. Because of the large size and disturbing symptoms at walking and footwear, excision of the tumor was planned as the choice of treatment with a prediagnosis of dermatofibroma. During the surgery a longitidunal "fishmouth" incision which includes the peduncle of the tumor was made at the plantar aspect of the great toe. The tumor was encapsulated with a firm tissue and adherent to the underlying skin. The mass was not directly related with the digital nerve itself but would have originated from a cutaneal branch of the nerve. By blunt dissection the tumor excised with its capsule and peduncle. Excisional defect under the great toe was primarily sutured after proper excision of the overrunning skins. The surface area of the tumor was consisting of dirty white colored and hemorrhagic areas. Cut surfaces of the excision material showed degenerative changes as hemorrhage areas, calcification and a hard fibrous matrix. Postoperatively there were no complication at the sutured incision site (Figure 1c). The neurovascular examination stayed intact from the beginning of the postoperative course. The patient discharged by the postoperative second day and began to the weight-bearing on the right great toe by two weeks. Histopathologic examination of the excised materaial confirmed the diagnosis as ancient schwannom (Figure 2a-b).

Discussion

The confusion between the terms neurilemmoma, neurofibroma and schwannoma always exits. While neurofibromata involves all the elements of the nerve, schwannoma develops from the schwan cells and can be removed without any damage to the nerve.[2] Schwannoma shows quite rarity on developing malign transformation. Neurilemmoma is the benign form of schwannom which is encapsulated with perinorium. Ancient schwannoma which also called degenerated neurilemmoma is an extremely rare condition which shows calcification and cystic degeneration is found only in a few cases in the literature.[1,2] This case is seen on the great toe of the left foot.[1] In the literature there is only 12 cases of schwannoma of the foot.[1]

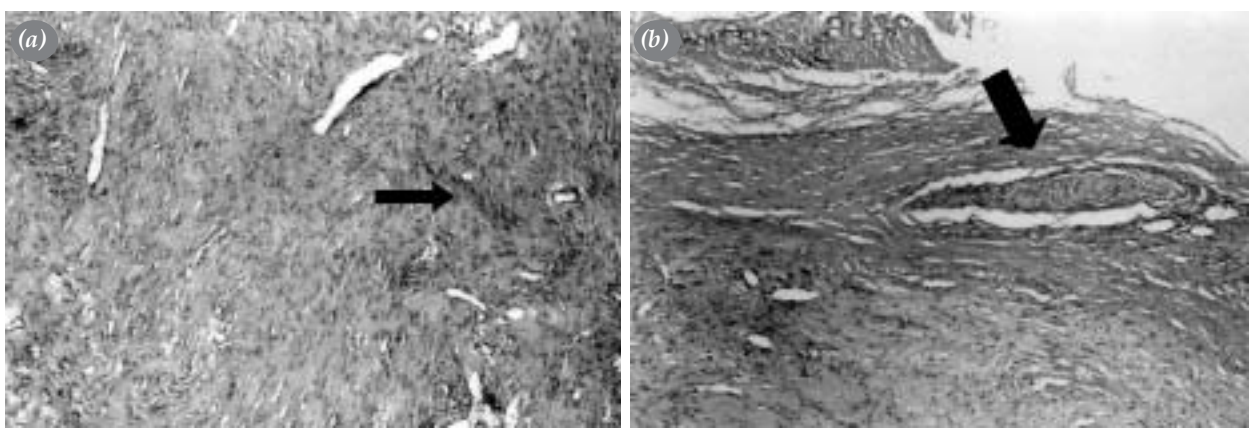

Figure 2. (a) Focal nuclear collection in the tumoral stroma with hypo and hypercellular areas formed by spindle cells (Verocay body), (H-E x 40). **(b)** Peripheral nerve tissue inside the capsular structure around the tumor (H-E x 100).

As in our case the tumor have nonspecific symptoms and different clinical presentations.[3] The patient had pain at the end stage of the tumor because of weight bearing on it. According to the nerve which the tumor develops, there can be other symptoms such as loss of sensation, lack of mobility or ulceration on the underlying skin.[1] Our patient did not have any of these symptoms.

The diagnosis is made primarily with the histopathologic examination. Histopathologically the tumor shows a mixture of Antoni type A and B patterns and may contain prominent blood vessels with hyalinized walls or calcification.[4] Antoni type A tissue is represented by tissue fragments with a fibrillar ground substance and slender, spindle-shaped cells forming obvious Verocay bodies (Figure 2a).[5] Peripheral nerve inside the capsule is a patognomonic histopathologic view (Figure 2b). Calcifications can be demonstrated on plain radiographies. In the stroma of the tumor there may be cystic areas which can be detected on MRI.[4] In this case there was not any need of MR Imaging for the diagnosis.

The tumor was clinically well limited and the indication for the surgery was clear. The surgery for the ancient schwannoma consists of simple enucleation of the tumor.[6] If the nerve is totally interrupted by the tumor, there would be a need of nerve grafting at the tumor site. In our case after the removal of the tumor, theworst problem was to have a unilateral hypoesthesia. So, a nerve grafting was not planned. After the surgery there was not any disruption of the integrity of the affected nerve on the great toe.

Therefore, ancient schwannoma of the foot is an extremely rare condition, it must be considered for differential diagnosis of masses seen on foot. Preoperative planning should be done for possible nerve grafting of the affected nerve.

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