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Aneurismal Bone Cyst at Talus

Case Report and Review of the Literature

Talusta Anevrizmal Kemik Kisti

Olgu Sunumu ve Literatürün Gözden Geçirilmesi

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ABSTRACT

The aneurismal bone cyst, is a benign but local destructive lesion of the bone. It may be formed at any bone; however it is observed in the diaphysis of the longest bones, at vertebra and pelvis. The talus located aneurismal bone cyst is seen very rare. The treated of aneurismal bone cyst is curettage and grefting. Any reoccurrence or complication has not been observed in the 10 months monitoring of our patient. Following the completely curettage of the lesion, it is thought that auto-greft application is a successful method which may be applied in the treatment of talus's aneurismal bone cyst.

Keywords: *Talus, Aneurismal bone cyst, Surgical treatment*

ÖZET

Anevrizmal kemik kisti, kemiğin benign fakat lokal destrüktif bir lezyonudur. Herhangi bir kemikte oluşabilmekle birlikte en sık uzun kemiklerin diyafizlerinde, vertebra ve pelviste görülür. Talus yerleşimli anevrizmal kemik kisti çok nadir görülmektedir. Anevrizmal kemik kistinde tedavi, küretaj ve greftlemedir. Bizim vakamızın da 10 aylık takibinde herhangi bir nükse ya da komplikasyona rastlanmamıştır. Lezyonun tam olarak küretajı sonrasında otogreft uygulaması talusun anevrizmal kemik kistinin tedavisinde uygulanabilecek başarılı bir yöntem olduğu düşünülmektedir.

Anahtar Kelimeler: *Talus, Anevrizmal kemik kisti, Cerrahi tedavi*

The aneurismal bone cyst (ABC), is a benign but local destructive lesion of the bone. It comprises approximately %1 of the primer bone tumors. It has been firstly defined by Jaffe &Lichtenstein in 1942 (1). It may be formed at any bone; however it is observed in the diaphysis of the longest bones, at vertebra and pelvis. The patients are usually of 20 ages and under. At the direct radiographies it is observed that cortex is excessively expanded. The ABC cases are limited (4,5). The literature has been reviewed together with the results of a patient operated by us in our clinic.

PRESENTATION OF CASE

A female patient aged 21, who came to our clinic with the complaint of pain at talus, in the anterior-medial of the talus, there was present a tubercle with pain, observed by hand and fixed on the bone. As a result of x-ray and MR tests, a large lythic lesion which was not exceeding the chondral layer at the head of talus but is overlying until the subchondral area has been determined within the bone. (Figure 1,2)

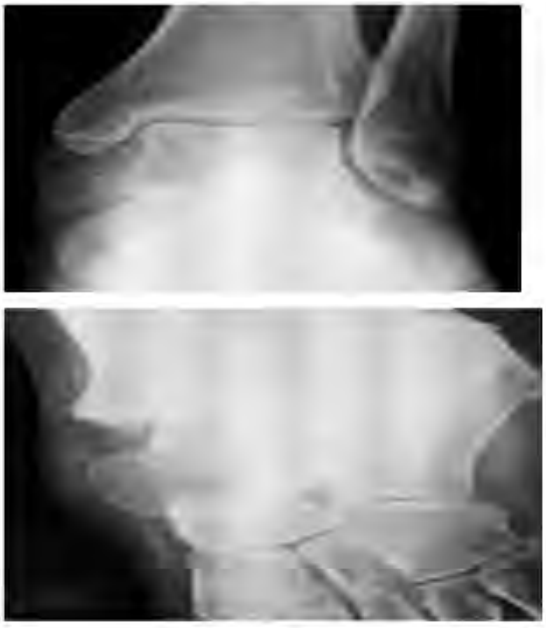

Figure 1: *The preoperative talus AP of the patient and the oblique graphic of the foot*

Figure 2: *Preoperative MR views of the patient*

Blood build up, blood pool in the dynamic bone scintigraphy of all the body with three phases, and retention of activity increased intensively of diffuse form at the localization conforming to left foot talus have been observed at the late static phases (Figure 3).

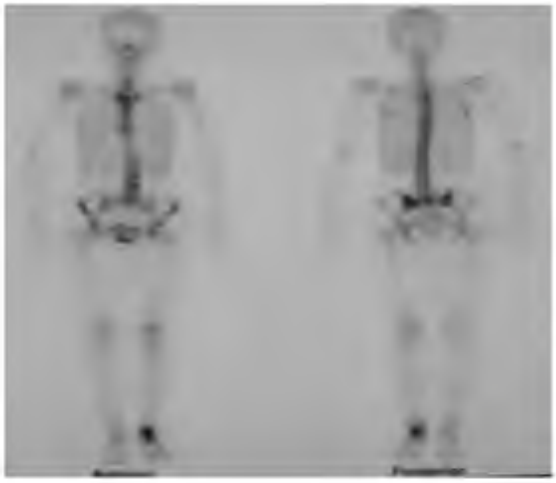

Figure 3: *Preoperative scintigraphic views of the patient*

With general anesthesia it has been entered with anteromedial approximate 6 cm transverse incision of left foot tales under the 350 mmHg pneumatic tourniquet. It has been seen that medial cortex of talus is quite thinned from place to place and its continuity has been broken. The lesion has been reached by entering form lythic cortical bone. The lesion has been completely curretaged, and the inside has been filled with cortico-spongious auto-greft taken from the iliac wing of the patient (Figure 5) Short leg plastering treatment has been applied to patient post operation.

As a result of pathological investigation, macrophages loaded with hemocyderin conforming to the old blooding findings, multinuclear huge cells and proliferated vascular structures have been seen. The result has been determined as aneurismal bone cyst (Figure 4). The plaster of the patient whose mobilization was permitted with the crutches in the early postoperative period has been taken off in the 2nd month and patient was permitted to walk in the 3rd month. At the graphics made in the 10 months monitoring of the patient it has been seen that greft has been welded (Figure 6). The talus movement of the patient who has not had any complaint was completely clear and indolent (Figure 7)

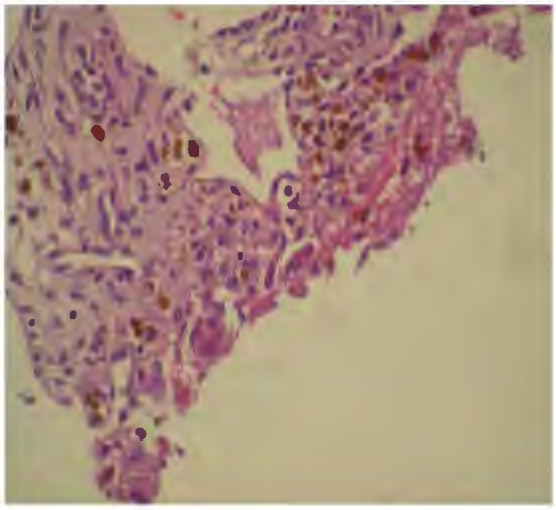

Figure 4: *The micro-photograph represents one of the diagnostic fields of ABC. Fibroblasts forming the septation, the macrophages loaded with hemocyderin conforming to the old blooding findings, multinuclear huge cells and proliferated vascular structures are seen (x 100 H.E.)*

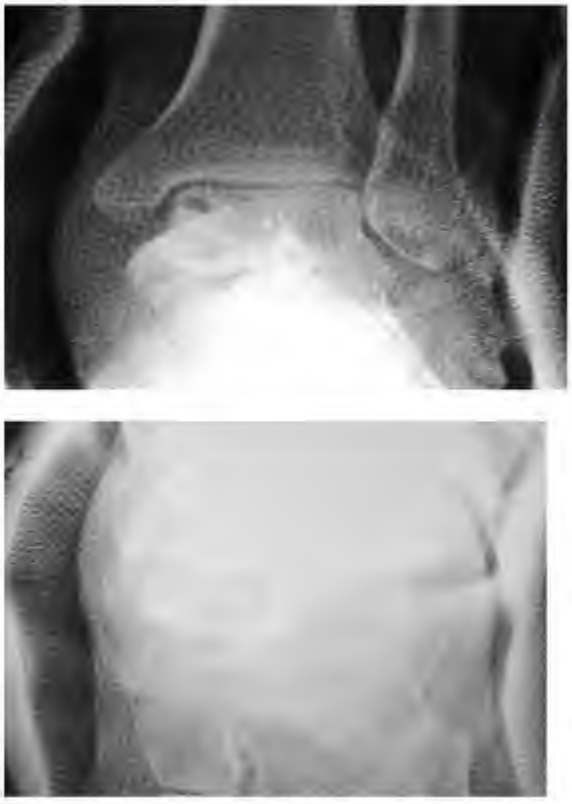

Figure 5: *The early postoperative talus AP and foot oblique graphics of the patient show that greft has completely filled the lesion.*

Figure 6: *Talus AP and lateral graphics made 10 months after operation of the patient.*

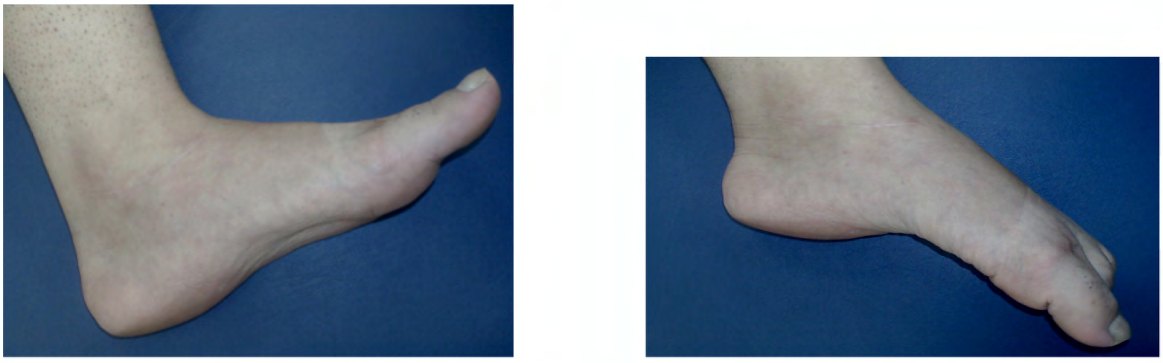

Figure 7: *The movement certainty of talus from 10th months after the operation of the patient.*

DISCUSSION

The aneurismal bone cyst is a benign but destructive progressing lesion of the bone. It is seen generally under age of 20. The talus located aneurismal bone cyst is seen very rare. At the radiography excessive expansion is seen at the cortex (2). Expansion is seen also in the preoperative graphic of our case (Figure 1).

In the literature it has been seen that at the ABC's of talus the head and neck areas are characteristically attacked (6). The distinctive diagnostic of ABC with bone tumors with huge cells located at talus is quite complicated (6,7). When the both tumors are located in this area, their prognosis are better than these proximal located (6).

The treated of aneurismal bone cyst is curettage and grefting. However the rate of recurrence is 20-30%. After the curettage, the other treatment methods are cryosurgery or bone cement application, arterial embolization and radiotherapy. It is recommended only for the cases which cannot be operated due that after radiotherapy complications, even infrequent, such malign change, growing defect, destruction of

reproductive organs and myelopathy as a result of radiation (2).

Talectomy is not recommended in the primer treatment of aneurismal bone cyst at talus. The success of curettage operation made by or without using bone greft is high (6).

The results of application of postoperative external fixator have been found successful as plastering (8). Metastasis, reoccurrence, retarded fracture or avascular necrosis has not been observed at the cases (6).

Any reoccurrence or complication has not been observed in the 10 months monitoring of our patient. Following the completely curettage of the lesion, it is thought that auto-greft application is a successful method which may be applied in the treatment of talus's ABC.

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