

Kısa Bilimsel Çalışma / Short Communication

Calcinosis circumscripta in a dog

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Summary: In the case, calcinosis circumscripta are described with macroscopical and microscopical findings on proximal of right limb in a 2.5 years old, male Rotweiller dog. Macroscopically, all masses were covered with skin and had firm. The cut sections were seen lobullary and composed of well defined areas and vicious and white fluid. Microscopically, it was detected that numbered of restricted areas, where the center had calcification in dark blue stained as haematoxylin eosin (HE) and red stained with Alizerine red S., connective tissue and mononuclear cell infiltration consisting of macrophages, lymphocytes and plasma cells and giant cells.

Key words: Calcinosis circumscripta, dog, histopathology.

Bir köpekte kalsinozis sirkumskripta

Özet: Bu olguda Rottweiler ırkı, 2,5 yaşlı, erkek bir köpeğin sağ ön bacağına proksimalinde kalsinozis sirkumskripta olgusu tanımlandı. Makroskopik olarak; kitler aynı özellikte ve üzerleri deriyle kaplı, oldukça sert kıvamlı, kesit yüzleri ise çok sayıda, lobuler tarzda, sınırları belirgin ve içlerinde koyu kıvamlı beyaz renkte içerik bulunan yapılardan oluşmaktaydı. Mikroskopik incelemede; dermiste, ortalarında hematoksilen eosin (HE) ile koyu mor renkte Alizerine red S. boyamasında ise kırmızı renkte boyanmış kalsiyum birikimlerinin çevrelerinden makrofajlar ve lenfositlerle birlikte dev hücrelerinde olduğu bağ doku hücreleri ile sınırlanmış yapılar görüldü.

Anahtar sözcükler: Histopatoloji, kalsinozis sirkumskripta, köpek.

Calcinosis circumscripta is an uncommon tumor like lesions characterized solid or multiple masses by ectopic, dystrophic, metastatic and iatrogenic deposition of calcium salts in soft tissues (2, 8-11). The pathogenesis of this lesions are unknown, but dog may develop suffering from serious illness such as chronic renal disease (11). It is occurred mostly in horse (between 1 and 13 years old), large dog breeds (<2 years old) which localized in pad nodullary (3, 8, 10). Pathogenesis is still unclear, but it has been thought due to trauma or excessive secretion of apocrin glands in dog and horse (5, 6, 9, 10). Especially, it is frequently seen in Magyar and German shepherd dog and made an assumption about susceptible to these kind of lesion for the breeds (4, 7, 9, 10). In this case, provides the macroscopically and histopathologically description of calcinosis circumscripta in a dog.

The biopsy materials taken from proximal of right limb of a 2.5 year old, male Rotweiller dog with suffering from a swelling and difficulty in walking. Macroscopically, masses from stated regions were weighed of 97 g, 11 g and 2 g and diameter in 10x6x4, 5x3x2 ve 2x2x1 cm. masses were covered with skin and had firm consistency. The cut sections were seen

lobullary and composed of well defined areas and white colored vicious fluid (Figure 1). Tissues were fixed in formalin %10, processed routinely and embedded in parafin. The sections were cut in 5 µm thickness to Alizerine Red S. staining for calcium salts identification and also to haematoxylin eosin (HE) staining. Microscopically, it was detected that numbered of restricted areas, where the center had calcification in dark blue (Figure 2) stained as haematoxylin eosin (HE) and red stained with Alizerine red S. (Figure 4), with connective tissue and inflammatory cell infiltration consisting of macrophages, lymphocytes and plasma cells and giant cells (Figure 3).

Calcinosis circumscripta is mainly evaluated in terms of causes as metastatic, dystrophic, idiopathic and iatrogenic. Metastatic calcinosis is mostly seen in human beings while the other types is usually encountered in dogs and cats (1, 3, 9, 10). Metastatic calcinosis is frequently occurred in calcium-phosphate metabolic disorders such as hypercalcemia, hyperphosphatemia and chronic renal disorders (2, 4, 5, 8, 10). However, dystrophic calcinosis is followed to necrosis, inflammation and neoplasia inspite of beings normally calcium-phosphat levels in blood. In idiopathic type of calcinosis,

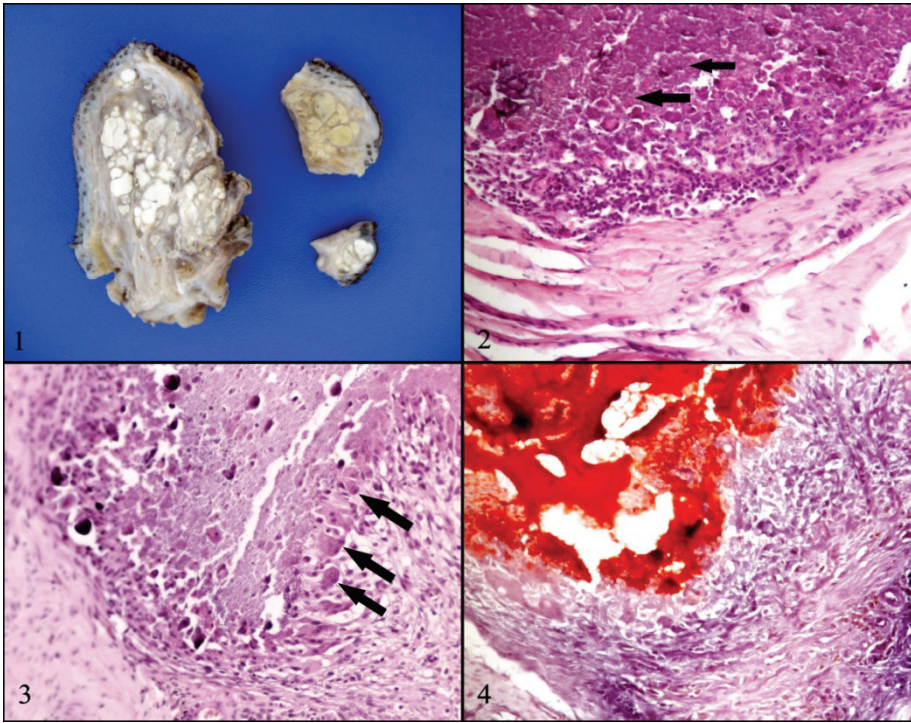


Figure 1. Macroscopical appearance of the masses.

Şekil 1. Kitlelerin makroskopik görünümü.

Figure 2. Granular calcium accumulation (arrows), HE, X100.

Şekil 2. Granuler tarzda kalsiyum birikimi (oklar), HE, X100.

Figure 3. Giant cells (arrows) around of calcium region, HE, X100.

Şekil 3. Kalsiyum çevresinde dev hücreler (oklar), HE, X100.

Figure 4. Calcium accumulation and granulomatous reaction, Alizerine red S., X100.

Şekil 4. Kalsiyum birikimi ve çevresinde granulomatöz reaksiyon, Alizerine red S., X100.

causes has not entirely been known but, breed predisposition has been thought since it is frequently seen in German and Magyar shepherd dogs (4, 7, 9). However, it is described in Rotweiler dog in the. *calcinosis circumscripta* is usually ocured focally and localized in pad of large breed dog (<2 year-old dogs) (2, 6, 10). But, it has often been confused with synovial osteochondromatosis and chondral sarkoma (5, 6, 9-11). In present case, it was detected that typical lesions of *calcinosis*, which had same characteristic, was circumscribed in multiple masses in proximal of right limb of 2.5 years old Rotweiler dog. On the other hand, it is mentioned about neither neoplasia nor metastasize. However, in the case presented herein, despite the malignancy of the masses, its recurrence and the rather bad prognosis, no such metastasis was detected. In conclusion, *calcinosis circumscripta* can be diagnosis by radiographic and histopatlogic examinations. And also surgical resection is a helpful for cure. This study will provide guidance for veterinary clinic practices.

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