What is your diagnosis?

History

An American Stafford, male, 9years old, is severely lame since 2 weeks in the left front limb. The lameness has gradually emerged and went progressively worse. No known history of trauma. The lameness is worse after rest and improves after some activity. The dog is reluctant to move. He has been treated for degenerative joint disease for 2 years now (location unknown) with NSAID's with no effect on the left front leg lameness.

Clinical examination

On inspection, the dog shows a severe lameness in his left front leg. Flexion and extension of both elbows is normal and not painful. On palpation, moderate distension of the left elbow, and slight distension of the right elbow is present.

Radiographic examination

Figure 1 and 2: 3 standard projections of both elbows were made (a medio-lateral in flexion and extension and one cranio-caudal view).

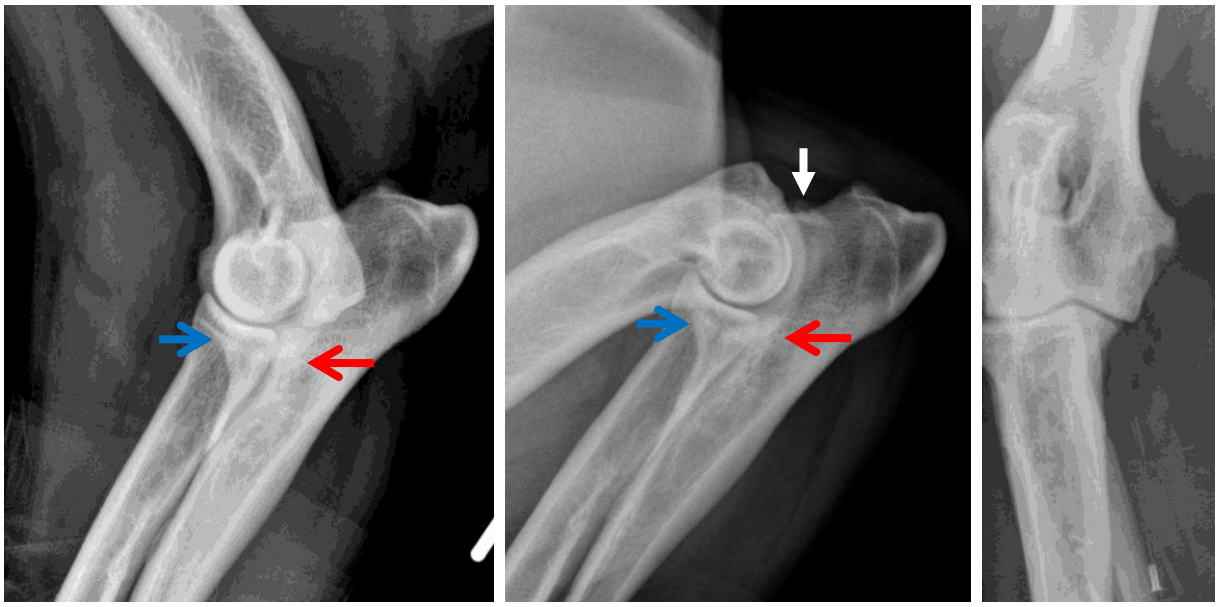

Figure 1: Extended-, flexed- and cranio-caudal-, slightly oblique view of the right elbow. A slight periosteal reaction is visible on the processus anconeus as a sign of degenerative joint disease (white arrow). Caudally of the radial head, moderate sclerosis within the ulna can be noticed (red arrow). The medial coronoid process is sharply delineated but shows a slightly abnormal form and looks less dense than normal (blue arrow).

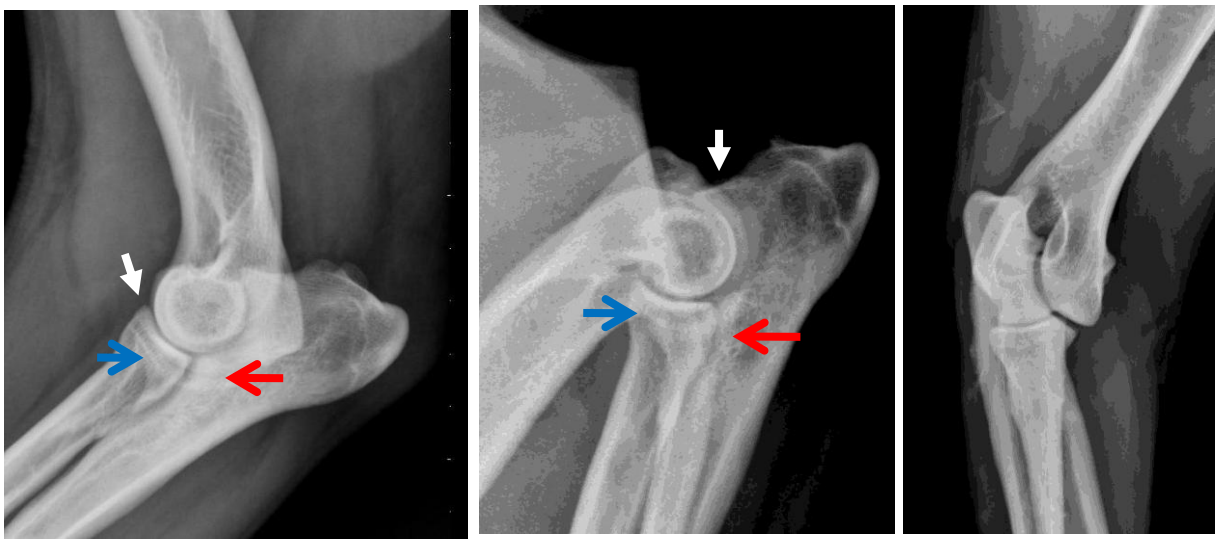

Figure 2: Extended-, flexed- and cranio-caudal-, oblique view of the left elbow. Minimal periosteal reaction on the anconeal process and cranial part of the radius is visible (white arrows). Moderate sclerosis in the ulnar area, caudal of the radial head is present (red arrow). The processus coronoideus medialis is showing an unsharp delineation and looks less dense than normal. These radiographic signs are compatible with coronoid disease.

Radiographically slight signs of degenerative joint disease are present. The left elbow is suspect for a medial coronoid problem. A CT-examination was carried out to confirm this suspicion and to have a more detailed view of the joints.

<u>Computed tomographic (CT) examination</u>

Figures 3 and 4: On the CT images, in both elbows, a large detached fragment in the area of the medial coronoid process was present.

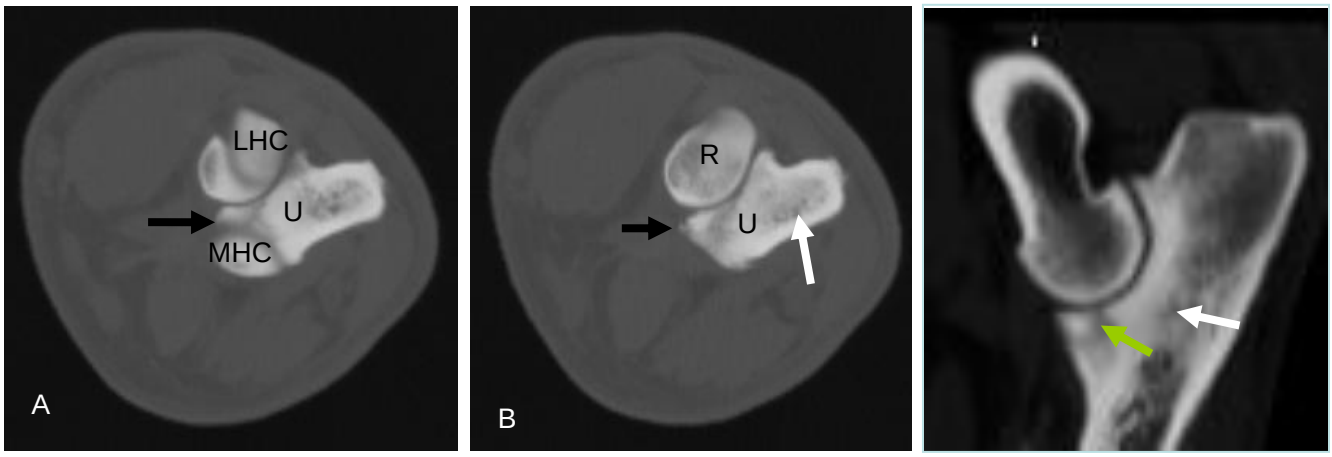

Figure 3: Transverse CT images in the coronoid area (A and B) and a sagittal reconstruction of the ulna (C) of the right elbow. The lateral humeral condyle (LHC), the medial humeral condyle (MHC), the ulna (U) and the radius (R) can be easily recognised. A radiolucent line is visible on the sagittal reconstruction in the area of the medial coronoid process (green line) representing a large fragment (9 x 5 mm) (black arrows). Extensive sclerosis can be noticed in the ulna (white arrows).

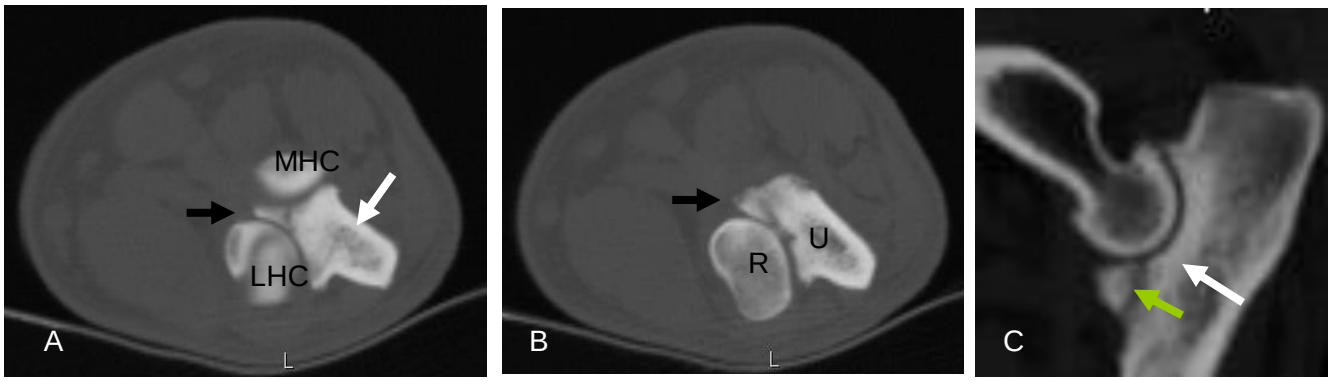

Figure 4: Transverse CT images in the coronoid area (A and B) and a sagittal reconstruction of the ulna (C) of the left elbow. A clear fracture line is visible in the area of the medial coronoid process on the sagittal reconstruction (green arrow) representing a large fragment (8 x 3 mm) (black arrows). Marked sclerosis within the ulna is also present (white arrows).

The main advantage of CT is that superimposition of overlying structures is avoided. This makes the evaluation of intra-articular structures possible and this is extremely useful in smaller joints. CT is a superior technique to evaluate bony changes. It also allows reconstructions of the joint in all different planes providing superior information.

Final diagnosis

Slight degenerative joint disease in both elbows and bilateral coronoid disease (fragmentation).

Treatment

The fragments were arthroscopically removed from both elbows.

Conclusion

Elbow pathology, and more specifically lesions or fragments, in the area of the medial coronoid process is a common finding even in adult or older animals. This disease can be diagnosed in typical breeds but can be present even in atypical breeds and can even in these animals be a source of lameness. Medical imaging and a thorough clinical examination are paramount for the correct diagnosis of elbow disease in general, and medial coronoid disease more specifically.