

IDENTIFICATION OF A C2 FRACTURE AND RACHIS DEVIATION THROUGH CT SCAN IN A CALIFORNIA SEA LION (*ZALOPHUS CALIFORNIANUS*)

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In November 2009, a bulge was identified on the left side of the neck in a 15-year-old male California sea lion (*Zalophus californianus*) by the training staff at Nausicaa. Though originally a reaction to a bite wound (even with no skin lesion apparent) was considered, the animal seemed to show no discomfort and the swelling showed no reduction by the use of anti-inflammatory drug. The swelling actually grew (or became more visible) to a 20 cm (7.87 in) size mass that then stabilized. Other differential diagnoses were then advanced, among others the development of a cold abscess, an enlarged lymph node (infectious, tuberculosis), or the presence of a tumoral mass. Blood results, x-rays, and ultrasound of the mass were unremarkable. Because of the high prevalence of tuberculosis in Europe, though not really in California sea lions, enlargement of a lymph node were high on the list. However, the Nausicaa population, based on RT tests, seemed to be a sane population and had even been chosen to test the efficiency of skin test in pinnipeds in Europe. Eventually it was decided to perform a CT scan and a biopsy at the same time, which would necessitate only one anesthesia for the animal. The procedure occurred at Oncovet, a small animal diagnostic imaging reference clinic, but situated a couple of hours driving from the Aquarium. Good animal husbandry and training techniques used at the department helped tremendously to make the procedure a success. Because of lack of space in the reference clinic and the presence of other clients with dogs and cats, the animal was anesthetized in a tent in the clinic's parking before being transferred to the scanner. Contrast product was injected in the jugular on the right side through an IV catheter. Neck and thoracic scanings were performed in dorsal decubitus. No mass was visible in the cervical region. A deformation of the second cervical vertebra, with embedment in C1, due to an ancient fracture by compression, was identified, with development of a bony calcification. This deformation provoked a lateral deviation of the rachis at the level of C1-C2 and the visible bulging. Consequent to this result, no biopsy was done. Recovery from anesthesia and voluntary transfer from squeeze cage to transport cage happened also in the tent before driving back to the facility. The animal still shows no symptoms or reduction of the mass. Comparable fractures are described in dogs as a consequence to a heavy shock (fight or car hit). The hypothesis is that the animal either fell hard on some rocks or possibly had a heavy fight with some other animals in the group, the subject being the lowest in the social ranking of this all castrated male colony. Ideally another CT scan should be performed to control the evolution of the fracture.