

A case of brachygnathia inferior and palatoschisis in a reindeer calf.

Ett fall av missbildning (underutvecklad underkäke och gomspalt) hos renkalv.

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The development of facial bones and the oral cavity depends on the integrated development of a large number of embryonic processes. A great variety of aberrations is found in all kinds of animals resulting from failures of integrated growth and fusion. Common failures are cleft lip, (cheiloschisis) and cleft palate (palatoschisis) and anomalies of the growth of the jaws. These are brachygnathia superior (abbreviation of the maxillary bones) and brachygnathia inferior (abbreviation of the mandibles).

In the early June a newborn reindeer calf had been found dead and was sent for examination to The Department of Wildlife Diseases at The national Veterinary Institute, Uppsala. The reindeer came from the Tärnaby area, Umbyn lap village, Västerbotten county.

At necropsy the calf, male, less than a week old, normally coloured, was found to have no trace of milk in its watery abomasal content. The mandibles were abnormally short (Plate 1) and there was an opening in the hard palate, extending from the mandibular junction (corpus mandibulae) to the anterior rim of the palate bone (Plate 2). No other pathological findings were observed.

The deformed calf belonged to a reindeer herd in which deformities of any kind had not been observed for the last 30 years. These developmental disorders, however, are not unknown in reindeer and sporadically observed in other ruminants as well.

According to E. V. Schmit (1937) deformities consisting of shortened «low maxillares», probably



Plate 1. Newborn reindeer calf with underdeveloped lower jaw (left). Calf of the same age with normal jaw (right).

Nyfödd renkalv med missbildad underkäke (vänster). Lika gammal kalv med normal käke (höger).

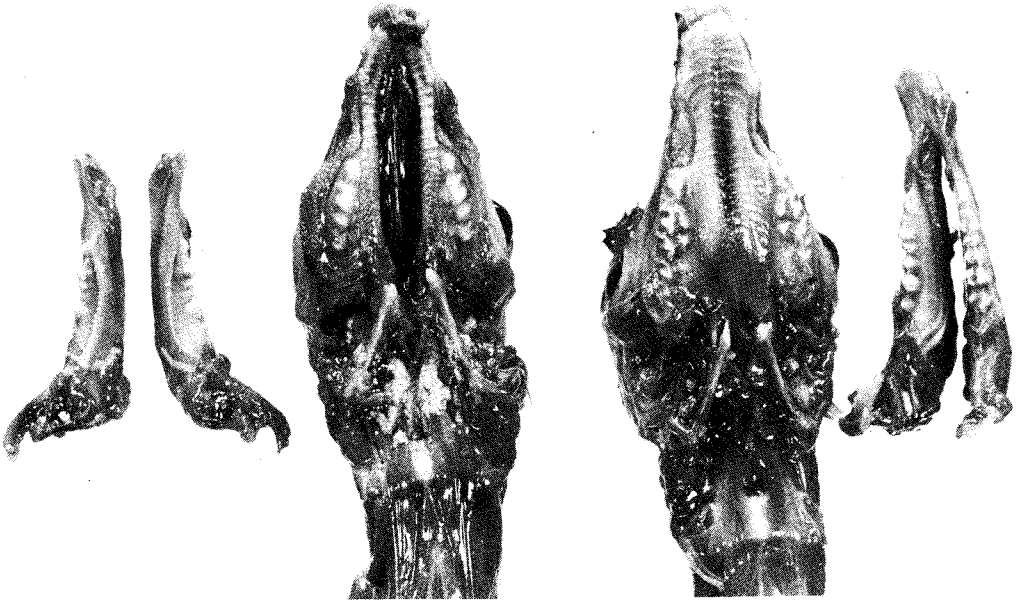


Plate 2. Reindeer calf with underdeveloped lower jaws and cleft palate (left). Calf of the same age with normal jaws and palate (right).

Renkalv med missbildad underkäke och gomspalt (vänster). Renkalv med normalt utvecklad käke och gom (höger).

to be understood as mandibles, were found in certain reindeer herds at Chukotka peninsula, USSR. The deformed animals were all entirely white without any pigmentation. In these herds the percentage of deformed calves were 4.6 and the deformity was considered to be due to the presence of some recessive genes.

Developmental deformities such as cleft lip, do not disturb the normal feeding behavior, but if the upper and the lower jaw do not fit together, and there is a cleft palate the calf will die due to dehydration and starvation within a few days after birth.

From a reindeer farmer's point of view it is important to exclude parents to calves with inherited disorders from breeding as economical loss, will be the consequence.

Keywords: Reindeer, deformities.

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Sammanfattning: I början av juni 1985 påträffades en död renkalv i Tärnaby-området, Umbyns sameby, Västerbottens län. Den sändes in till SVA för obduktion. Kalven, normalfärgad hankalv, några dygn gammal, visade sig behäftad med underutvecklad underkäke och gomspalt (Bild 1 och 2). Frånvaron av mjölk i löpmagen tydde på att kalven inte kunnat dia.

Denna typ av missbildning förekommer sporadiskt hos många djurslag och är inte alldeles okänd hos renar. I en rysk rapport från 1937 talas om renhjordar på Chukotka-halvön med så hög missbildningsfrekvens bland kalvar som 4.6%. Dessa kalvar var alla helvita. Missbildningen, som i de flesta fall sannolikt har en ärftlig bakgrund, är dödlig i det att kalvarna är oförmögna att dia och därför dör på grund av uttorkning inom några dygn. Företeelsen är till följd härav svår att upptäcka. För renägarna är det av avelshygieniska skäl viktigt att vajor med missbildade kalvar slås ut ur aveln.

Reference

SCHMIT, E.V., 1937. The case of an inherited deformity in reindeer. - *Arctic Inst USSR, The Sovjet Reindeer Industry*. 9: 103 - 106.