ANASARCA AND PULMONARY HYPOPLASIA SYNDROME IN A BELTED GALLOWAY CALF

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The anasarca and pulmonary hypoplasia syndrome (APHS) was originally reported in a family of Australian Dexter cattle by WindSOR and coworkers (Austr Vet J 2006, 84, 278-81). Cases occurred in a pattern consistent with autosomal recessive inheritance and were characterized by accumulation of large amounts of fluid in the subcutaneous tissues and severe pulmonary hypoplasia. Dystocia was a common complication.

A stillborn Belted Galloway calf was submitted for post mortem examination as part of the Danish Bovine Genetic Disease Programme due to the presence of severe anasarca. THE CALF had been delivered by Caesarean section due to dystocia. THE CALF was already dead and autolysed when the Caesarean section was initiated. The dam was euthanized at the end of the procedure due to exhaustion.

THE CALF weighted 13.7 kg and had obvious malformation of the body due to extensive accumulation of fluids in the cutis, subcutis and muscles. When inserted, these swellings were found to consist of diffuse oedema and cysts of various sizes with serohaemorrhagic content. In addition, fluids had accumulated in the thorax and abdomen. The lungs were severely hypoplastic. The heart was enlarged and had an interventricular septal defect and dilation of the pulmonary trunk. Palatoschisis and bilateral abdominal cryptorchidism were also present. A whole body X-ray performed prior to the necropsy showed shortening of the mandibles, maxillas and incisive bones. Examination of the available four generation pedigrees did not reveal inbreeding loops, but the names of some animals indicated that they originated from the same herds.

The post mortem findings are basically consistent with APHS although this case was not identical to the Dexter type, e.g. by the presence of palatoschisis. A certain variation in phenotype has been reported in monogenic disorders previously, so this observation is not unexpected. The finding indicates that APHS may be a genetic disorder present in the Galloway breed, but further cases are needed to prove a genetic aetiology.