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Newborn rabbit with frontal encephalocele

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Rarely a newborn rabbit presents with a deformation of the head. It can have a hereditary origin or be linked to a developmental defect of the fetus.

Encephalocele results from the abnormal development of the neural tube at the beginning of gestation. This defect is associated with an autosomal recessive gene that is expressed either at the level of the spinal cord – *spina bifida*, or on top of the head, in form of an encephalocele.

If the defect is located in the head region, it hinders the proper closing of the skull bones and of the skull. This incomplete closing is located at a sagittal level, between the forehead and the nostrils. As a result, there is a protrusion – a hernia, which contains brain tissue as well as membranes



Figure 1: One day old rabbit newborn born with an encephalocele



Figure 2: Detail of the head of this newborn rabbit

that surround and protect the brain and spinal cord tissue.

To my knowledge, only one case of encephalocele has been described in a hydrocephalus newborn rabbit. In this case, the newborn rabbit, aged 3 weeks old, was the result of inbreeding.

This 1 day old newborn rabbit was one of 11 siblings, offspring of a female Belgian

beard rabbit (Figure 1, 2). It was alive and active, yet, it was decided to humanely euthanize this newborn to spare it future sufferings as its chance to survive seemed poor.

Further information

Geelen JAG. A case of hydrocephalus and meningo encephalocele in a rabbit caused by aqueductal malformation. *Laboratory Animals (London)* 1974 : 167-176.

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