



PEROSOMUS ELUMBIS IN FOUR CALVES



Testoni S. (Department of Veterinary Clinical Science - Padua)

Mazzariol S. (Department of Public Health, Comparative Pathology and Veterinary Hygiene - Padua)

Gentile A. (Veterinary Clinical Department - Bologna)

FeMeSPRum, Bari 2005

PEROSOMUS ELUMBIS

This rare congenital anomaly of unknown aetiology is characterized by partial or complete agenesis of lumbar, sacral and coccygeal vertebrae. The spinal cord ends in a blind vertebral canal. It usually includes arthrogryposis of the hind limbs and malformations of the musculature. Perosomus elumbis has been reported in pig, sheep, cattle and man.

RECORD OF CASES

Four calves (one Italian Brown and three Italian Holstein - three males and one female), already dead (three alive-born and killed, one stillborn), were submitted to the Veterinary Faculties of Padua and Bologna due to macroscopic skeletal malformations of the vertebral column.

CALF n° 1

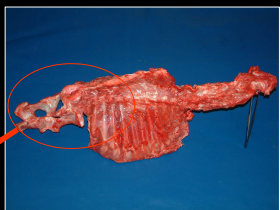
The head presented brachygnathia inferior.

The torso was shortened and its dorsal profile was interrupted by a circular skin area devoid of hair (spina bifida).

The lumbar, sacral and coccygeal vertebrae were entirely wanting.

The back of the lumbo-sacral region was composed of only soft tissues.

There was atresia ani.



CALF n° 2

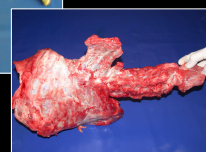
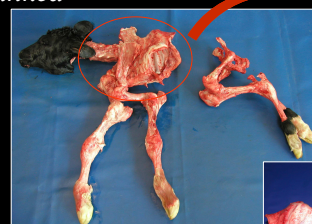
The hindquarters were completely underdeveloped.

The pelvic bones were present but clearly hypoplastic.

The hindquarters were linked to the rest of the body only by soft tissues.

The thoracic vertebrae ended abruptly.

The lumbar, sacral and coccygeal vertebrae were completely absent.



CALF n° 3

The head, neck and forelimbs appeared normal.

The caudal end of the torso was interrupted by a circular mass of soft tissues.

The lumbar vertebrae were misshapen, whereas the sacral and coccygeal vertebrae were absent.

The left hind limb was malformed.

The anal opening lacked sphincter structure.



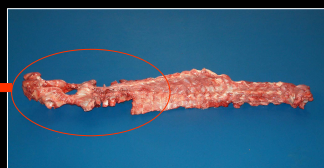
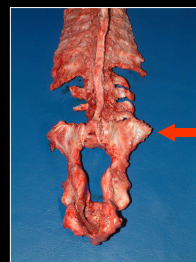
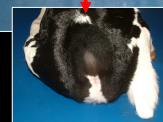
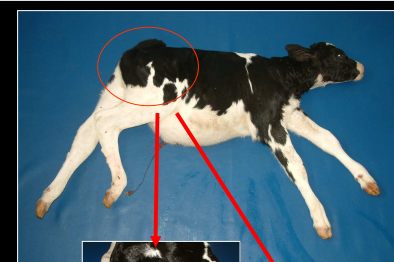
CALF n° 4

The head, neck, forelimbs appeared normal.

The caudal end of the torso was interrupted by a circular mass of soft tissues.

The lumbar vertebrae were misshapen, whereas the sacral and coccygeal vertebrae were absent.

There was atresia ani.



CONCLUSION

Perosomus elumbis is a rare and singular vertebral dismorphism. Malformation or improper migration of the neural tube during the tail-bud stage, accompanied by partial agenesis of the caudal spinal cord, seems to be the cause of this abnormality. Its aetiology is still unknown. Only the reporting of further cases will permit to improve the knowledge of its origin. Therefore we invite bovine practitioners and breeders to submit all animals with such malformation to research or diagnostic centers.