

OTTER CALF  
(Case Report)

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SUMMARY

A full term fetus showing congenital defects in the head and limbs.

The calf had inferior brachygnathia combined with four limbs deformity. Failure of the horizontal plate of palatine bone to fuse with the palatine process of the maxillary bone. When the head was sectioned, large fluid filled cavity revealed in the lateral ventricles. Other parts of the central nervous system apparently well developed. These findings were compared with similar defects in other animals described in the literature.

INTRODUCTION

Brachygnathia is described as an abnormal shortening of the jaw. It is described as short lower, parrot beak mouth, as a single isolated congenital defect in cattle. It may be accompanied by cerebellar hypoplasia in Angus calves (Greene et al, 1973).

Hydrocephalus is the accumulation of cerebrospinal fluid (C.S.F.) in the ventricles of the brain. It is the commonest and best documented C.N.S. defect (Priester et al., 1970, Greene et al., 1973 and Cho and Leipold, 1977).

Peromelia is the failure of the distal skeleton of the limbs to develop. It occurs in horse, sheep, pig, and goat (Jubb and Kennedy, 1963).

#### OBSERVATION

A full term dead fetus was presented to clinic in Baghdad showing inferior brachygnathia combined with four deformed limbs. Besides, failure of the horizontal plate of palatine bone, to fuse with the palatine process of the maxillary bone thus resulted in nasal and mouth cavities communication (Figs. 1 & 2).

The calf has a rudimentary ear without ext. acoustic meatus. All four limbs were short up to the level of patella in the hind limb and the distal extremity of humerus in the forelimb. Other bony skeleton of the limbs were absent as appeared by radiography (Figs. 3 & 4).

The head was sagittally sectioned to examine the central nervous system. It revealed large fluid filled cavity in the lateral ventricles resulted in compression of the cerebral hemispheres against the skull. Other parts of the C.N.S. apparently well developed.



Fig.1. Ventral view of the head of deformed calf. Inferior brachygnathia with the absence of palatine bone are obvious.

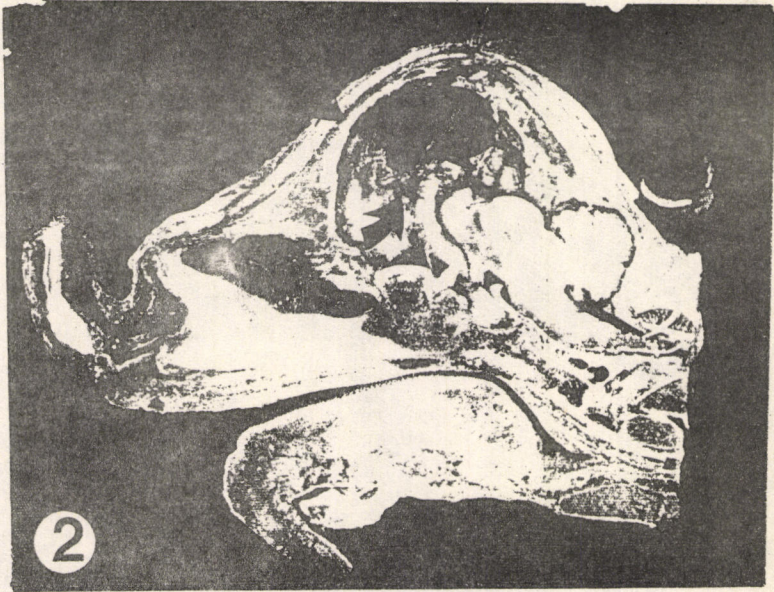
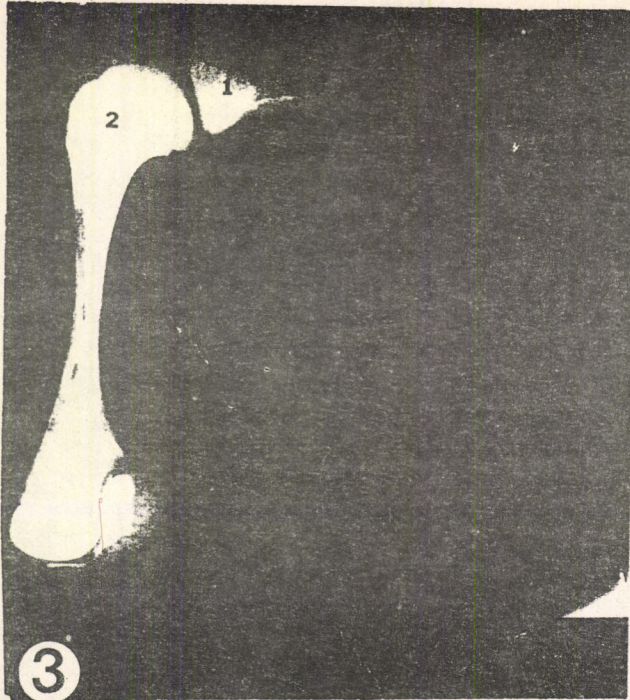


Fig.2. Sagittal section of the head showing the cavity in the cranium (hydrocephalus). Arrows.



Figs. 3 & 4. Radiographs of fore and hind limbs.  
1. Scapula 2. Humerus 3. Pelvis 4. Femur 5. Patella

## DISCUSSION

Central nervous system defect in calves were reported by many authors. it could be single isolated case or combined with other defects. Hydrocephalus was described as being internal (inside the ventricles ) or external (between the brain and meninges).

In this case, it is internal hydrocephalus due to accumulation of C.S.F. in the lateral ventricles and this appeared to be due to obstruction of the C.S.F. pathways (the interventricular foramen). Congenital hydrocephalus was reported to be inherited in many breeds and in cattle as a simple autosomal recessive (Urman and Grace, 1964).

Other defects accompanied hydrocephalus was reported in many species, however, peromelia in calves was not previously reported. On the other hand, inferior brachygnathia was reported to be one of the defects usually accompanied C.N.S. congenital deformities.

## REFERENCES

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## الخلاصة

تمت دراسة عجل مولود بتشوهات خلقية وسجلت حالة قصر الفك الاسفل مع تشوهات في الاطراف الامامية والخلفية . كذلك لوحظ فضل المفيحة الافقية للعظم الحنكي للالتحام مع البروز الحنكي للعظم الفقري. تم قطع الرأس بصورة سهمية لدراسة الجهاز العصبي المركزي الذي اظهر وجود تجويف مملوء بالسائل في البطينات الوحشية. الاجزاء الاخرى في الجهاز العصبي المركزي تبدو متكاملة النمو.

تمت مقارنة هذه الملاحظات مع ما درج في الابحاث في الحيوانات المختلفة .