A CASE REPORT OF DIPROSOPUS CONDITION IN A CAT

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A case of diprosopus in a female kitten retrieved by caesarean section is reported. There was symmetrical duplication of all facial structures and fusion of skulls had occurred in the temporal region. There were two sets of lips, eyes and external nares, while only two ears were present on the outer side of each face. No other abnormality in terms of cleft palate or lip, neck, trunk and limbs was observed. The queen made an uneventful recovery under therapeutic regimen.
Keywords: Craniofacial duplication, Diprosopus.

Congenital malformations in animals include structural and functional abnormalities present in newborn at the time of birth which may affect a single organ or various body systems (Noden and de Lahunta, 1985). Diprosopus (Greek word for two faces) is a conjoined twin monster which is having a single trunk and normal limbs associated with varying degrees of facial duplication (Arey *et al*., 1960 and Ramadan, 1996). The degree of changes in facial structures may range from minor duplication of premaxilla (Noden and Evans, 1986) or nose (Barr, 1982), to a completely duplicated face (Sekeles *et al*., 1985). The description of diprosopus is generally based on various alterations in external features. However, the duplication may also be observed in internal structures and more particularly those of central nervous system. The incidence of diprosopus condition is extremely rare but the condition has been reported in man (D'Armiento *et al*., 2010), cattle (Salami *et al*., 2011), lamb (Shojaei *et al*., 2006) and cats (Sekeles *et al*., 1985). The present communication places on record the clinical case of diprosopus condition in kitten delivered via caesarean section.

Case History and Observations

A four years old Persian breed queen in her third kittening was presented with the history of dystokia for last 8 hours following normal delivery of three live kitten in early morning. The queen was in good health condition (body weight 2.4 kg) and was vaccinated and dewormed as per recommended schedule. The patient was referred by consulting Veterinarian after unsuccessful attempts to deliver foetus pervaginum using whelping forceps. The clinical examination of the patient revealed severe dehydration along with subnormal temperature (36.9^0C), tachycardia (170 beats per minute) and tachypnoea (38 breaths per minute). The cat had urinated only once in the morning and there was absence of defecation since last night. Pervaginal examination revealed the presence of foetal head tightly obstructing the pelvic canal. The patient was subjected to ultrasonographic examination which confirmed presence of one large sized foetus with no viable heartbeat. Based on the history, clinical and ultrasonographic findings, it was considered to be a case of dystokia and emergency caesarean section was planned accordingly.

Treatment and Discussion

The initial stabilization of the patient was carried out by administration of 100 ml of lukewarm DNS to overcome dehydration and hypothermia. Broad spectrum antibiotic ceftriaxone at the dose rate of 25 mg/kg b.wt. and corticosteroid dexamethasone at the dose rate of 0.5 mg/kg b.wt. were also administered I/V to counteract chances of shock.

The cat was premedicated with diazepam at the dose rate of 0.5 mg/kg body wt. I/V followed by administration of ketamine at the dose rate of 7.5 mg/kg body wt. I/V, 10 minutes later for induction of general anaesthesia. Aseptic preparation of abdominal region from umbilicus to pubis was performed in the routine manner. A left flank laparotomy was done to expose gravid uterus. A large sized single foetus obstructing the pelvic canal was retrieved via hysterotomy. The uterine wall was sutured using catgut no. 2-0 followed by copious lavage of peritoneal cavity with lukewarm normal saline mixed with metronidazole solution. The abdominal musculature was closed in double layer using catgut no.1 followed by skin suturing in simple interrupted pattern using braided silk no 1-0.

The patient was prescribed with ceftriaxone I/V injections twice daily for 5 days while analgesic meloxicam was administered I/M once daily for three days. Oral administration of laxative (Cremaffin plus) was also advised for seven days to allow easy defaecation. Regular dressing of the suture line was carried out with 5 % povidone iodine along with application of fly repellant spray twice daily for 10 days. The animal showed progressive signs of improvement under the umbrella of therapy given in the post operative period and skin sutures were removed on 12th day post operative.

A fawn coloured stillborn female kitten was retrieved by caesarean section. Crown-roup length of kitten was 13cm and it weighed 120 grams. The major abnormal finding was symmetrical duplication of head involving almost complete face. There was fusion of both skulls in the temporal region. There were two sets of fully developed lips, oral cavity, eyes and external nares. There was absence of cleft in the hard palate inside both oral cavities (Fig. 1). However, there were only two ears situated on the outer side of each face. The neck, trunk and limbs were normal in anatomical position and size. No other abnormality could be detected in any other part of the body. The owner refused to perform necropsy, radiological and further investigations in the dead kitten.

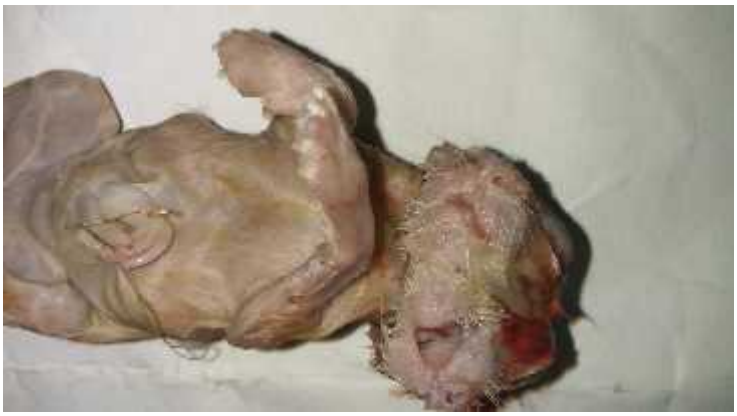

Fig. 1: Symmetrical duplication of face (diprosopus) with normal neck and limbs

The present case revealed absence of any cleft palate and hence it differed from previous case report where cleft palate was observed in both oral cavities in diprosopus cats by Sekeles *et al*. (1985). There was absence of cleft lip condition in either face in the present clinical situation which was also in contrast to the presence of cleft lip in one face of diprospus kitten as was reported by Aharon *et al.* (1986). The presence of normal external nares as well as nasal septa in the present clinical case was also in contrast to the findings of missing ventral portions of nasal septa in diprosopus kitten by Sekeles *et al*. (1985).

The exact cause for exhibiting this type of anomaly is still not clear and it is

thought that they are either inherited in nature or caused by environmental teratogen.

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