Secondary ectopic pregnancy in a cat: a case report

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ABSTRACT
A case of secondary ectopic pregnancy found in a 2½-year-old queen. The clinical case history, surgical findings and examination of excised tissue are described and discussed.

CASE REPORT
A 2½-year-old domestic, short-haired queen was admitted for ovariohysterectomy three months after her last and second litter. One week before this event she had been attacked by a dog and although there were no apparent wounds she had been severely shocked; she gave birth to three normal, live kittens. Routine palpation of the abdomen demonstrated two hard extra-uterine masses present in the abdominal cavity.

Under general anaesthesia, induced with i.v. Saffan (Glaxovet Ltd., Uxbridge, Middlesex) and maintained with Halothane (May and Baker Ltd., Dagenham, Essex) and oxygen, a mid-line laparotomy was performed. There was an unusually large quantity of fluid within the abdominal cavity. The uterus had involuted and there was evidence of a scar near the distal end of the right horn (Fig. 1) from which, a cord-like structure extended towards a completely encapsulated foetus (F1) (Fig. 1); this greyish white sac measured $7 \times 4 \times 4$ cm.

A further foetus (F2) was found to the left of the abdomen, it was covered by a transparent membrane, and was embedded in, and adherent to, the omentum which was thickened and congested. The limbs and part of the ventral abdomen were not adherent to the omentum.

The bladder wall was thickened with evidence of a peritoneal reaction, the broad ligament was congested.

The ovarian vessels and ligament on both sides and the uterine body were ligated cranial to the cervix and severed in the normal way. The foetus on the right side of the abdomen (Foetus 1) was easily removed from the abdominal cavity in...
association with the right uterine horn and ovary. The foetus located in the left side
of the abdomen (Foetus 2) was adherent to omentum and a large omental vessel
was ligated, following clamping with a large haemostat, before it could be removed
together with attached omentum.

The linea alba and skin were sutured with chromic cat gut and monofilament
nylon, respectively. The cat made an uneventful recovery.

**Examination of excised tissue**

Both ovaries were inactive and the uterine horns completely involuted. Near the
distal end of the right uterine horn the remains of a patent umbilical cord of Foetus
1 could be identified entering the lumen of the horn; there was no evidence of a scar
in the myometrium or endometrium.

The greyish, white encapsulating sac of Foetus 1, which was about 2 mm thick,
was probably the remains of the allantois. When incised a fully developed,
mummified foetus covered by a transparent membrane, the amnion, was present, a
7 cm long remnant of the umbilical cord could be identified.

Contained within the membrane that surrounded Foetus 2 was a white, thick
mucoid fluid which might have been the remains of the amniotic fluid. The foetus
measured 7.5 cm from crown to rump and mid-dorsal to mid-ventral dimension
was 3 cm. The umbilical cord of Foetus 2 was 6 cm in length and was adherent to the encapsulating sac of Foetus 1 (Fig. 1).

**DISCUSSION**

Two types of ectopic pregnancy have been described, these are classified according to the original site of the conceptus (Roberts, 1971). Although a primary extra uterine pregnancy has been reported in a cat 18 months after ovariohysterectomy (Carrig, Gourly & Philbrick, 1972), this particular one was probably a secondary extrauterine pregnancy or pseudo-ectopic pregnancy in which the foetuses escaped from the uterus, via a tear in the wall, in late gestation or at the time of parturition. It is not possible to determine the precise time of the event although it was most likely to have occurred when the cat was attacked by the dog 1 week before parturition. Thus, there was rupture of the right horn with the subsequent escape of the two foetuses into the abdominal cavity. The remainder of the litter, probably all contained within the left horn, were expelled normally at parturition.

Foetus 1, contained within its foetal membranes, remained free within the abdominal cavity, however, Foetus 2 caused a peritoneal reaction involving the omentum and became encapsulated. In the absence of bacterial contamination both foetuses became partially mummified.

**REFERENCES**
