CASE REPORT

Surgical Management of Secondary Uterine Inertia in Two Bitches

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Primary or secondary uterine inertia is due to lack of normal physiological uterine contraction during or after parturition. Secondary uterine inertia is commonly observed in bovine, however, it is comparatively less reported in canine. In certain breeds of dog such as the Scotch terrier or Dachshund secondary uterine inertia may occur spontaneously early in the second stage of parturition. Usually, one or two fetuses are expelled normally and then labor ceases even though more fetuses are present in the uterus (Roberts, 1982). The present report places on record the difficult whelping due to secondary uterine inertia and its radiographic diagnosis and successful surgical management in 2 bitches.

Case history, clinical and radiographic findings

A primiparous non-descript bitch aged about one year was presented to Veterinary Hospital with a history of restlessness and changed behavior. Palpation of the ventral abdomen revealed the presence of abdominal mass. Mammary gland engorgement was also appreciated. At presentation, the animal had normal physiological parameters. Per vaginal examination revealed complete cervical dilatation and presence of the head of dead fetus within the birth canal. Another non-descript bitch aged about 2 years was presented with a complaint of 24 hours of partial anorexia and black-green vaginal discharge. The bitch had normal signs of whelping and initially delivered 2 fetuses (one live and one dead). Per vaginal examination confirmed the presence of a fetal head at the birth canal (Fig. 1). Based on history, clinical findings, abdominal and per vaginal examination a tentative diagnosis of dystocia due to secondary uterine inertia was made. The abdominal radiographic examination confirmed the presence of multiple fetuses in both the gravid uterine horns with different presentation and position (Figs 2A and B).

Treatment and discussion

After adequate lubrication, per vaginal gentle traction was used to exteriorize fetus in both the cases. In case 1, the effort was unsuccessful while in case 2, head of dead fetus was grasped with the whelping forceps and taken out with gentle traction.

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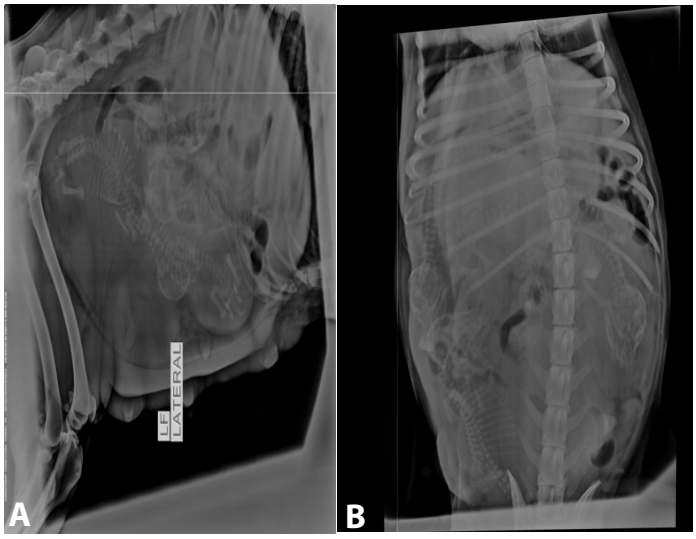
Further per vaginal exteriorization of fetuses in both the cases was not possible and hence cesarean section was performed. Animals were routinely prepared for aseptic surgery. They were restrained in dorsal recumbency and draped as per the standard procedure. Intravenous lactated Ringer's solution at the rate of 10 mL/kg/hour was given throughout the surgery. Premedication was done with an intravenous injection of 0.5 mg/kg diazepam. Anesthesia was induced and maintained with an intravenous injection of 10 mg/kg ketamine hydrochloride. Ventral midline coeliotomy was performed

Fig. 1: Position of dead fetus in birth canal



Figs 2A and B: Plain radiograph showing fetuses in a gravid uterus

Fig. 3: Plain radiograph showing fetuses in a gravid uterus

between umbilicus and pubis and the abdominal cavity was opened. Gravid uterine horns were exteriorized (Fig. 3). An incision was made on the dorsal surface of the uterine body and fetuses were removed along with associated placenta by the milking of uterine horns. The uterine incision was closed using a two-layer inverting continuous pattern of Cushing or Lambert with number 2-0 chromic catgut. The peritoneum was lavaged with a normal physiological saline solution containing diluted povidone-iodine. Coeliotomy incision was closed and dressed routinely. Postoperatively meloxicam (0.5 mg/kg, once a day, IM) was given for 3 days and cefotaxime (50 mg/kg, twice a day, IM) for 5 days. On day 10, skin sutures were removed. Both the animals made an uneventful recovery.

Radiography is a useful technique to confirm the exact number of fetuses, their presentation, position, and posture. To relieve the dystocia that resulted from secondary uterine inertia, manual removal of the dead foetus from the birth canal may be attempted after ensuring all precautionary measures. If it is not possible then the cesarean section is the only choice to relieve such condition (Arthur *et al*., 2001). Secondary inertia is met with in all species and it is a preventable condition if recognized early that labor has ceased to be normal and application of the appropriate assistance. Sometimes in the bitch, normal parturition will commence but after the expulsion of few pups will then cease, even though there is no obstruction (Arthur *et al*., 2001). In multiparous animals, secondary uterine inertia may result during or immediately after manual removal of an offending fetus that caused dystocia. Consequently, remaining fetuses are not able to expel. Cesarean section is only treatment of choice in these cases (Roberts, 1982). In the present report, after adequate lubrication of birth canal of the bitch with dystocia, manual removal of the dead fetus was possible. Similarly, Raut *et al*. (2009) also reported successful delivery of single pup through the vaginal passage by lubricating the vaginal canal and gentle manipulation of the fetus with the help of whelping forceps in case of uterine inertia in the bitch.

In this report, dystocia due to secondary uterine inertia in two bitches and their surgical management has been recorded. Radiography was found a very effective technique for diagnosis of such cases. In case of the dead fetus at birth canal cesarean section is advisable in the bitch.

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