Case Report

ULTRASONOGRAPHIC DIAGNOSIS OF A LIVE ECTOPIC FOETUS IN A COW

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ABSTRACT

A Jersey crossbred cow which was presented with the history of inanition and purulent vaginal discharge was investigated. Gynaeco-clinical and ultrasonographic examination revealed severe utero-ovarian adhesions and with presence of live ectopic foetus in the pelvic cavity. The present report places on record a rare case of secondary ectopic pregnancy in a crossbred cow.

Keywords: Cow, Ectopic foetus, Ultrasound

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Introduction

Ectopic or extrauterine pregnancy denotes a pregnancy that occurs elsewhere than within the uterine cavity (Roberts, 1971)**.** Occurrence of ectopic pregnancies may be categorized into primary and secondary forms (Corpa, 2006). In the primary form, an oocyte is fertilized in the abdominal cavity or a fertilized ova enters the peritoneal cavity and becomes attached to the mesentery or abdominal viscera. Secondary form of ectopic pregnancies follows the rupture of uterus after the foetus has been implanted due to external trauma (Owensby *et al.,* 2001). In farm animals, the later form of ectopic pregnancies were recorded occasionally and were usually diagnosed during the time of parturition (Hedge, 1989; Mitchell, 1989; Sheetal *et al*., 2018; Prabaharan *et al*., 2020). The present communication places on record a rare ultrasonographic documentation of a live ectopic foetus during first trimester of pregnancy in a crossbred cow.

Case history and observations

Once calved Jersey crossbred cow was presented to the Gynaecology Unit of Veterinary Clinical Complex, Veterinary College and Research Institute, Orathanadu with the history of inanition for the past one month and purulent vaginal discharge for the past one week. It was reported that the animal was inseminated four months back and

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pregnancy was confirmed at two months post AI.

Vaginal examination revealed two finger dilatation of the cervix with muco-sanguineous discharge and flakes of pus in the vaginal canal. On rectal examination, to assess the pregnancy status, it was found that the genitalia was immovable and thick in consistency with severe adhesions along the whole of left side. Cervix, uterine horns and both the ovaries could not be felt distinctively due to extensive adhesions. However anterior border of the uterine horns could be felt as a mild bifurcated hard mass near the pelvic brim. Hence no positive signs of pregnancy could be recorded.

Trans-rectal ultrasonographic investigation (Sonoscape S2V, China) was carried out to study the extent of adhesions The uterine horns were found to be severely curled with hyperechoic fibrotic tissue (Fig. 1). No fluid was visualized within the uterine horns. Further exploration towards the left side revealed presence of a foetus adjacent to the fibrosed uterine entity. Ribs and abdominal viscera were distinguishable (Fig.2). Feeble heart beat was noticed. Foetal head could not be clearly distinguished due to extensive adhesions. The crown rump length (CRL) was 49.4 mm. Autolytic changes of the foetus seem to be initiated with tissue disintegration at the posterior border of the foetus (Fig. 2).

Treatment and discussion

Based on the clinical findings, the case was diagnosed as secondary ectopic pregnancy based on the descriptions of Roberts (1971) and Corpa (2006). Exploratory laporatomy was the only option to diagnose the condition and to decide upon its surgical correction. Since the utero-ovarian adhesions were extensive and the breeding value of the animal was questionable the owner has not accepted for surgical procedures.

Roberts (1971) reported that the secondary extrauterine pregnancies occur during the last two-thirds of the gestation period. All the previous reports on ectopic pregnancies in cow (Hedge, 1989), buffalo (Sheetal *et al*., 2018), goat (Prabaharan *et al*., 2020) and ewe (Mitchell, 1989) also documented presence of fully developed foetus in the abdominal cavity and were diagnosed at the time of parturition due to the problems in foetal expulsion. The present report is unique and first of its kind that a live ectopic foetus could be documented during the first trimester of pregnancy in a crossbred cow.

As there was no proper history, the causative factor for the rupture of uterus and escape of foetus into the pelvic cavity could not be ruled out. However, trauma due to assault or indiscriminate genital palpation by the quacks might have caused the severe uterine damage and perimetritis. Subsequently, chronic progressive inflammation might lead to uterine tear, escape of foetus and severe adhesions. The foetal age was estimated to be around 54 - 55 days based on the CRL measurement which did not correlate the gestational stage of four months as stated by the owner. Based on the observations of foetal autolytic changes, it could be assumed that the foetal growth was retarded in the extrauterine site. There were no previous reports to substantiate the present observations.

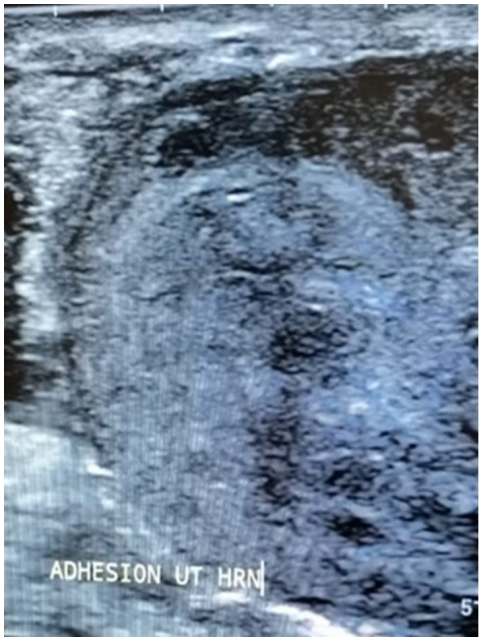

Fig. 1. Uterine horns with severe adhesion

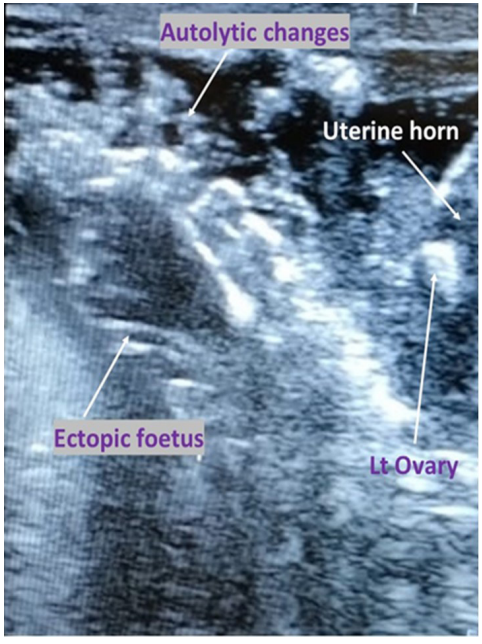

Fig.2. Foetus in pelvic cavity with autolytic changes- adjacent to uterine horn and left ovary

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