The Indian Journal of Animal Reproduction; 28(2): 116-117; Dec. 2007 **Case Report**

Ultrasound detection of twinning in *Equus asinus*- A case report

S.N. TANDON[1], SUMANT VYAS[2] AND R.A. LEGHA[1]

Equine Production Campus, N.R.C. on Equines, P.B. No. 80, Bikaner

ABSTRACT

A rare case report of twinning in *Equus asinus* (jenny) detected by ultrasound is being reported.

Key words: Twins, Ultrasound, *Equus asinus.*

Twin ovulations are common in 25% mares especially Thoroughbred. The literature on ovulation rate of *Equus asinus* (Jenny) is scanty. The birth of live twins in Jenny is relatively uncommon, ranging between 0.8 and 3% depending upon the breed. The major factors are (i) fertilization failure (ii) death of one or both embryos before or after fixation (iii) death of one fetus, which is relatively uncommon and (iv) abortion of both fetus. The last event is most common sequel (Arthur *et al.*, 1996). While detection of double ovulations by B-mode ultrasound has enabled better management and hence the presentation of the problem. However, it is still possible that double ovulations remain undetected. A rare case report of ultrasound detection of twinning and birth of one live and one dead twin in jenny *(Equus asinus)* is being reported.

A female jenny aged 16 years (No.F- 18) belonging to stable of equine production campus of N.R.C. on equines Bikaner came to oestrus on 27-6-2000. The estrus lasted for seven days. The animal was inseminated with liquid semen collected from male donkey named Vishal in artificial vagina and extended by Glucose EDTA extender (1:1) on 30-6-2000. The dose of inseminated semen was 6 ml with initial motility about 90%. The sperm concentration of semen was 280 million/ml. The female was examined for uterine status by Ultrasonography on 17-7-2000. The linear array fixed frequency (5 MHz) rectal probe of Dynamic imaging was used for Ultrasound scanning. The scanning showed one big non-echogenic area encircling another circular non-echogenic area (Fig. 1). Repeated examination after 4 days confirmed the same observations. This was tentatively diagnosed as case of twinning. Normally in twinning the two embryos/embryonic vesicles could be distinctly observed as two separate entries by ultrasound. But in present findings both vesicles were seen as concentric rings. The literature on jenny is scanty *(Equus asinus)* but in mare it is well documented that the embryos are mobile and freely move in between the horns before they are fixed to endometrium (Ginther, 1983). If initial examination is done before fixation (day 16/17) and the twin embryos are in different horns, they are reduced to a singleton by the manual destruction of one, either by pressure with the transducer or by the use of the hand. If the initial examination is done after fixation and if both embryos are in one horn they cannot be separated at this stage and termination of one embryo is not possible manually (Arthur *et al.*, 1996). Transvaginal ultrasound guided allantocentesis offers successful approach but the required instrument was not available. The pregnancy could be terminated by use of PGF_2á but that leads to loss of both embryos therefore it was decided to persist with the twin embryos and extra care of dam during the pregnancy.

The animal foaled on 12-6-2001 and delivered one male and one female foal. The first foal delivered

[1] [2]Equine Production Campus, N.R.C. on Equines [2]National Research Centre on Camel

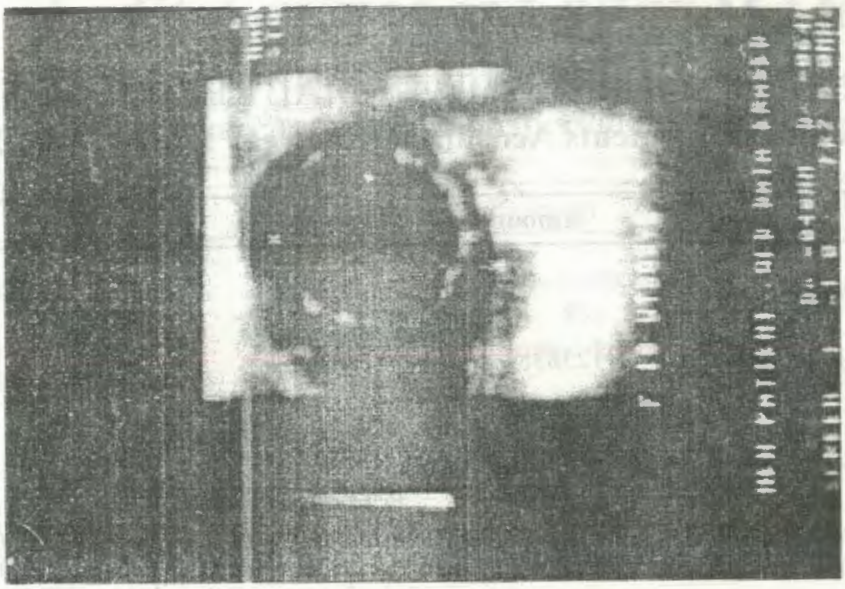

Fig. Ultra Scanning photograph showed one big non-echogenic area encircling another circular non-echgenic area

was male and survived. The female foal was expelled as dead after 20 min of first foaling. The foal gestation length in this case was 350 days, where as the average gestation length of jenny in the stable is 382±5 days.

REFERENCES

Arthur, G. H., Noakes, D. E., Pearson, H. and Parkinson, T. J. (1996). Veterinary Reproduction and Obstetrics. Seventh edition. W.B. Saunders Co. Ltd. London. pp. 71-72.

Ginther, O. J. (1986). Ultrasound imaging and reproductive events in the mare. 3rd Edit., Madison Equiservice, pp 378.

Ginther O. J. (1983). Mobility of the early equine conceptus. Theriogenology, **19**: 603-609.

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We all look forward for overall development of veterinary Science in general and Veterinary Gynaecology & Animal Reproduction in particular under his dynamic leadership.

President ISSAR