



EQUINE FETAL GENDER DETERMINATION BY TRANSRECTAL AND/OR TRANSABDOMINAL ULTRASONOGRAPHY IN MID-GESTATIONAL MARES

Introduction

More horse owners are interested in fetal gender determination (FGD) before parturition.

Aim

This study focused on FGD by transrectal and/or transabdominal ultrasound (US) of mid-gestational mares under farm conditions.

Material and Methods

FGD was performed in 100 mares between 120 and 270 days of pregnancy using B-scale US (Esaote MyLabMTClassC). None of the mares were sedated nor shaved and the procedure was completed within 15 minutes. Diagnosis was based on differences in US structure of the gonads. Gonads with a central circular echogenic structure (lining the cortex) were considered ovaries whereas testicles are homogene with a central longitudinal echogenic line. This appears more obvious when using Doppler. Besides gonads, other reproductive organs were looked at to make the final judgment. Udder, vulva and clitoris in female feti and (glans) penis and scrotum in male feti can be visualized. In most cases, more than two characteristics are seen. The results are verified at birth.

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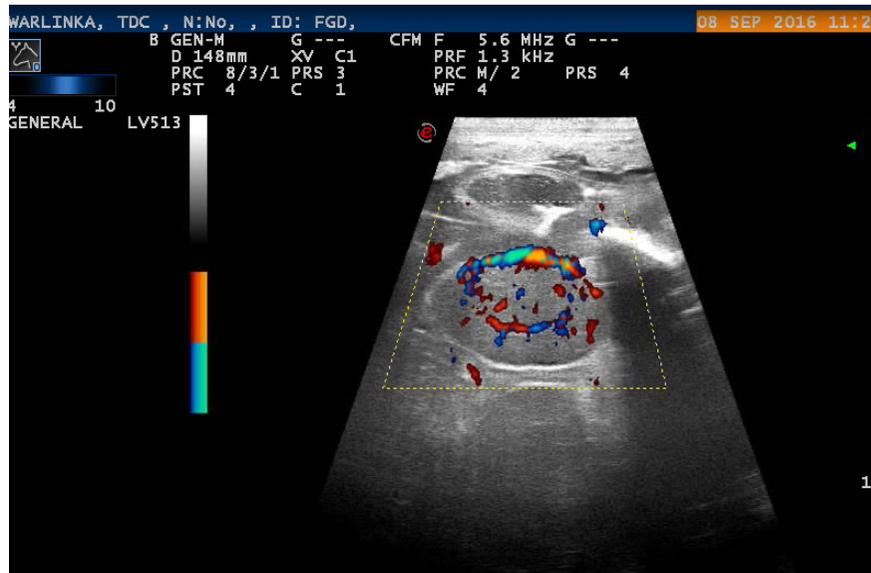


Figure 1: Female gonad on US with Doppler mode to accentuate the inner circular echogenic lining of the cortical border of the ovary.

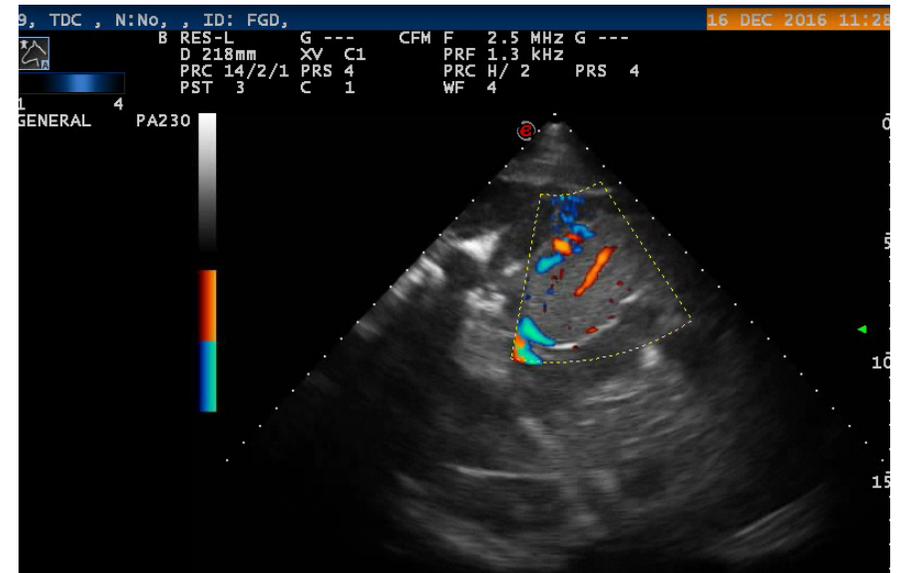


Figure 2: Male gonad on US with Doppler mode to accentuate the outer lining of the testicle and the central longitudinal echogenic line.

Results

Up to now, 53 of the 100 mares gave birth. In 100% of female (27/27) and 92% (24/26) of male feti, the determination was correct. In case of misdiagnosis, only one characteristic was seen during US and wrongly interpreted due to the foal's position. Sometimes the extremities preclude a good visualization of the inguinal region in late gestation.

Conclusions

Ultrasonographic FGD in mid-gestational mares is a grateful and accurate technique. Although a good ultrasound machine is a prerequisite and the examiner needs to have some experience, the technique is accessible under farm conditions.