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The biopsy of the boar testis using ultrasonography control in pigsty conditions

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The biopsy of live animal testis is an important clinical manipulation for obtaining tissue samples to control pathologies.

The aim of experiment was to develop a method of boar testis biopsy using ultrasonography (USG) and to establish the influence of this procedure on the boar testis parenchyma and breeding ability.

Fig 1. Examination of boar's testis using USG controle

Fig 2. The ingury of skin

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•**Methodology:** The biopsy was carried out in six 8-months-old boars in the vivarium of the Faculty of Veterinary Medicine, Latvian University of Agriculture.

•20 days prior to 21 days after the biopsy*, the quality of ejaculate* was examined (volume, pH, temperature, concentration, activity and pathologies of spermatozoa) with a 10-days intervals.

•*The general anaesthesia* of boars was done with 7ml of 10% ketamine infusion intravenously.

•The testis region was *prepared for surgery* with 70%ethanol solution and 1cm *skin incision* was made.

•An examination was performed with *USG equipment Philips HD11 using a linear probe L12-3MHz i*n the middle region of testis (*margo liber*) to detect the site of biopsy (without large blood vessels)

•Parenchyma were recorded with *USG three times*: directly before the biopsy, 15 minutes after procedure and 21 days after biopsy.

•*A biopsy gun* was used with a 12cm needle 1.8mm in diameter *(„Vitesse").*

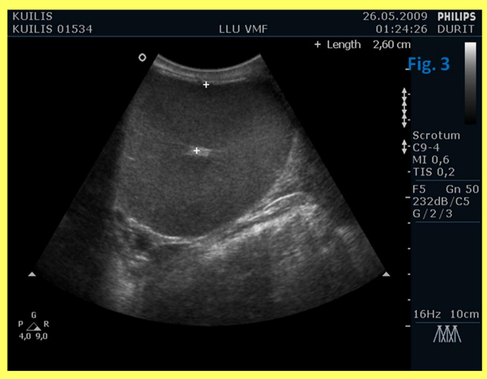
•Biopsies were performed in the depth of 1.2-1.6cm of parenchyma.

•*The tissue samples* were fixed in 12%formol saline, embedded into paraffin, cut in 4μm thick sections and stained with haematoxylin-eosin and Masson's trichrome.

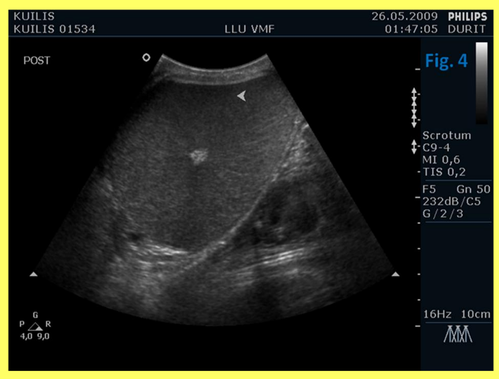
•**Results:**

•15 minutes after biopsy, in the USG image of all the boar testis macroscopic injures of the parenchyma were not detected (picture 4)

F3



F4



F5

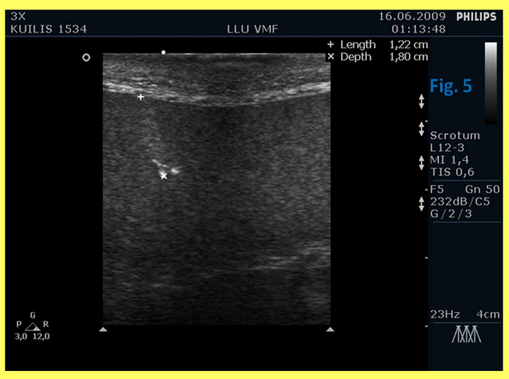
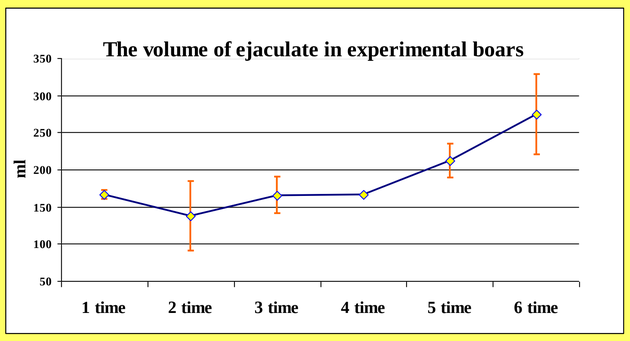


Fig. 3-5. Transversal (3;4) and sagittal (5) ultrasonoscopic view of testes (Boar No.1534). F3- before biopsy (depth to mediastinum 2,6 cm); F4- 15 minutes after biopsy (no signs of haematoma); F5- 20 days after biopsy (the hyperechogenic linea in the depth of 1,22 cm)

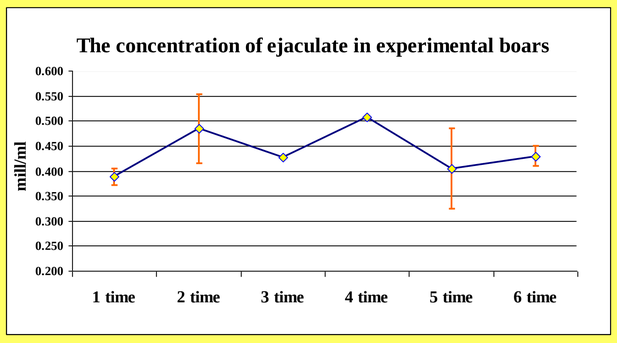
•21 days after the biopsy, the hyperechogenic linea diameter 0,1-0,2cm was seen in the testis parenchyma in the depth of 1,2-1,6cm (picture 5).

•The were not significant differences (p>0.05) between mean volume of ejaculate, concentration and activity of spermatozoa 20 days prior to 21 days after the biopsy (Figures 6,7,8)

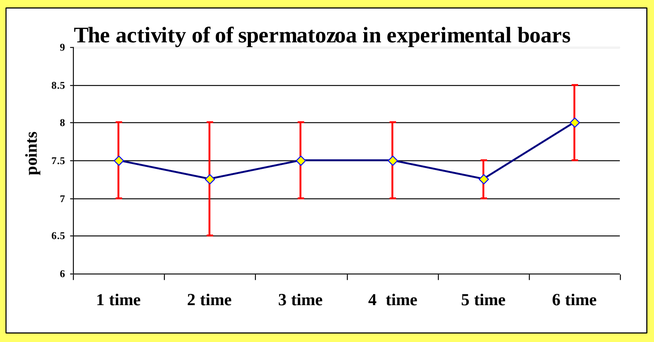
F6



F7



F8



Conclusions: **The biopsy of boar testis did not influence the breeding ability of boars.**

A perfect biopsy of boar testis is easy to perform using USG in the pigsty conditions.