Forland. The ideal situation would be to gain access to the walrus digestive system and count the number of parasites per section of the digestive tract. Due to the protection of the species and the difficulty in taking off the body, it is not possible. However, there is still a possibility of faecal examination.

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***Surmacz Paulina**, Fourth year student of the Biotechnology*
Scientific supervisor – Ewa Kautz, DVM, PhD, Assist. Prof.; Anna Niwińska, MSc
Institute of Veterinary Medicine
Warsaw University of Life Sciences WULS-SGGW, Poland

COMPARISON OF SPERM STAIN® AND SPERM BLUE® STAINS IN THE CASES OF PHYSIOLOGICAL AND PATHOLOGICAL CANINE EJACULATES ANALYSED BY CASA SYSTEM

In recent years, we have been struggling with an increased number of canine sperm pathologies. The main causes of consistently decreasing dogs' sperm counts and incorrect morphology are not only irreversible genetic defects eg. cryptorchidism but also environmental and lifestyle factors. Additionally, breeding problems and troubleshooting are generating high medical costs.

The purpose of this study was to perform a cheap, valuable in-house protocol for canine spermiogram and to compare two commonly used stains in veterinary practice using a standard optical microscope and Computer Assisted Semen Analysis (CASA, Microptic, Spain).

All participating dogs (n=13) underwent general clinical examination as well as detailed examination of male reproductive system. In this study preheated and previously washed with sterile PBS artificial vagina was used to obtain the samples. 6 physiological and 7 pathological ejaculates were obtained from dogs aged between 1,5 and 7 years. Semen volume, sperm concentration, motility, and morphology were analyzed. For microscopical sperm assessment CASA Sperm Class Analyzer 5.4.0.0 SCA Research Edition- Motility module (Microptic, Spain) system was used. Sperm concentration, motility and progressively motile sperm percentage were determined. Morphology samples were prepared by smearing on a glass slide. Samples were air-dried and stained using Sperm-Stain® and Sperm-Blue®. Stains chosen and used in this study are the most available and widely used in laboratories and veterinary practices due to their price and repeatability. Both stains were used according to the manufacturer protocols designed for dog sperm assessment.

The samples were analyzed using a standard optical microscope (Nicon Eclipse E200) at following magnifications: x10, x20, x40 and x100 with immersion oil. Parallel, Computer Assisted Semen Analysis was performed using CASA Sperm Class Analyzer 5.4.0.0 SCA Research Edition – Morphology module (Microptic, Spain) at x100 magnification with immersion.

The sperm measurements were focused on: sperm head length, head breadth, sperm head area, perimeter and acrosome. All data was analysed and counted for teratozoospermic index.

During the study a significant difference was noticed between the two stains by using CASA System alone in visualization of following abnormalities: acrosome distortions, vacuoles presentation (immaturity), midpiece malformations, cytoplasmic droplet presentation, coiled tail, as well as asymmetric, thin, paint-brush shaped sperm heads. Sperm head measurements (head length, breadth, head area and perimeter) were successfully measured using both stains and no significant differences were noticed. Although the samples preparations using both stains are fast and uncomplicated, in case of Sperm-Stain® the sample was more visible due to the clearer marking of the sperm head. The morphology of the head was more visible, as well as the acrosome was better marked. Sperm with morphological defects were easier to identify. Similar effect was observed using a standard optical microscope. On the other hand Sperm Blue® stain was easier to work with for measurement of sperm head perimeters, due to more intensive contrast staining.

The research shows that in particular veterinary practice the Sperm-Stain® might be a better dye for a fast, in-house sperm analysis presenting statistically more malformations in ejaculates, although Sperm Blue® might be a choice for quick, clinical review of sperm morphometric evaluation.

On the occasion of the conducted research, we noticed a qualitative difference in the semen of dogs of different breeds. It was related to the sperm count in the fraction and semen motility and morphology, which may be useful in follow-up studies.

Trojakowska A., *Third-year student of the Institute of Veterinary Medicine*
Zuchniak A., *Second-year student of the Instituite of Veterinary Medicine*
Scientific supervisor - M. Domino, DVM, PhD hab. in Veterinary Medicine, Assist. Prof.; M. Maśko, PhD in Animal Science, Assist. Prof.
Institute of Veterinary Medicine Warsaw University of Life Sciences, Warsaw, Poland

THE DIFFERENCES BETWEEN TERMOGRAPHIC IMAGES OF EQUINE METACARPUS VIEWED FROM THE DORSAL, PALMAR, LATERAL, AND MEDIAL ASPECT

Infrared thermography (IRT) is a non-invasive technique of detection and measuring infrared radiation emitted spontaneously from a certain object, which is turned into a visible image afterward. When used in animals, thermal imaging provides a pictorial representation of the body surface temperature distribution. In recent years, IRT has increasingly gained an important position in equine medicine as it has proven particularly useful in the diagnostic field. As the skin temperature is correlated with the