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Clinical and Histomorphological Comparison of Polypropylene Mesh with the Coated One (Sepramesh) in Healing of Abdominal Wall Defects in Horse
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Introduction
Defects of abdominal wall are common in horse due to surgery, trauma and etc. Previous reports have shown that the application of normal prosthetic materials such as polypropylene or anionic polysaccharides meshes are effective to repair the wall defects but adhesion formed. We resulted in application of the new coated polypropylene mesh had less adhesion formation. The aim of this study was to compare a coated polypropylene mesh (Sepramesh, Genzyme Cambridge, MA) with a simple polypropylene mesh.

Material and Methods
Ten adult male and female cross breed horses were used for the study. After anesthesia and preparation of the linea alba, a 4×8 cm incisional defect was created in the rectus abdominis muscle of each horse. The sepramesh and polypropylene mesh were applied for each group (5 horses) randomly. In polypropylene group, healing process generally didn’t show any homogeneity in surgical site caused by excessive fluid accumulation and probably inflammatory effusion and connective tissue in ultrasound examination on 28th days after surgery.

Results
The tenacity and extent of adhesion between the mesh and vicera was significantly lower in the Sepramesh group (P<0.05, Mann whitney U test). Horses received a Polypropylene mesh, experienced higher levels of inflammation during postoperative care, but significant difference was not apparent after 4 weeks, although this difference was noticeable histomorphologically (P=0.08).

Discussion
This study confirmed advantages of coated sepramesh to polypropylene mesh in repair of defects of abdominal wall in horse.

Reference:

Natural Dewormer” Does Not Do the Trick in Donkeys
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Introduction
For donkey’s it’s important to control worm infections, therefore the use of anthelmintics is common practice. Because anthelmintics became prescription only medicine in July 2008 and anthelmintic resistance became more widespread, alternatives that claim efficacy against endoparasites are administered more and more.

Material and Methods
In May of 2009 we investigated the efficacy of an herbal product called Verm-X in nine donkeys from Stichting Ezelsoeuriteit in the Netherlands. This product is not registered as a medicine but as a natural dewormer and claims “low infection pressure/repelling of parasites”. The nine donkeys ranged in age from 8-34 years. We used the Faecal Egg Count Reduction Test (FECRT) to assess the efficacy of this product. This method is routinely used to determine the development of resistance against a specific anthelmintic drug. The McMaster technique was used to determine Faecal egg counts (FEC) and was performed at day zero just prior to treatment and at day 14 after the last treatment. The standard was set at an efficacy of at least 90%. The donkeys were treated with Verm-X as recommended by the manufacturer but 2 days longer.

Results
Mean Eggs per gram (EPG) before treatment was 210 (range 50-500) and mean EPG after treatment was 356
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(range 50-1000). Only two donkeys showed a decrease (40 and 75%) in FEC for strongyle eggs. Seven donkeys showed an increase in faecal egg counts.

Discussion
We found no efficacy of this product against strongyles and hence strongly advise not to use this product as a dewormer.

DETECTION OF GONADIC TISSUE IN A CRYPTORCHID HORSE BY PCR
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Introduction
This case report describes the diagnosis, surgery, histology and immunohistology of an abdominal and calcified gonad in a stallion.

Material and Methods
The left gonad of a 2 year-old Haflinger stallion was not detectable during the clinical examination including transrectal and transabdominal ultrasonography. Intraoperative exploration of the abdominal cavity following paramedian access near the inguinal region revealed a firm structure, which was completely surgically removed for histological, immunohistological and molecular biological examination. The removed structure was therefore subdivided into nine pieces. Actin and HE stained slides were prepared from each of the nine sections. Thereafter, a specimen of each zone was used for RT-PCR using primers to detect StAR in order to identify Leydig cells. An hCG stimulation test was applied four days after surgery.

Results
There were no complications during anaesthesia, surgery, recovery and wound healing. Tissue calcification was noticeable while cutting the firm structure. Tubules could not be definitely identified in the HE stained slides. However, actin staining revealed rarely tubular wall structures. Leydig cells were detected by RT-PCR within 6 of the 9 zones. In the negative specimen connective tissue, blood vessels, smooth muscle cells and only few cells of unknown origin were detectable. The postoperatively applied hCG stimulation test was negative. The cord-like, firm structure, which was completely surgically removed, was identified as at least partially gonadal tissue.

Conclusions
This type of equine cryptorchidism reported here was not detectable by clinical examination and could therefore not differentiated from monorchidism or ectopic testis pre-surgically. The calcified, firm tissue could not clearly be identified as testicular tissue by histology. However, PCR turned out to be a sensitive method for the detection of gonadal tissue in such calcified, firm tissue.

References available upon request.