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P. Malik – V. Pálfi:

PRACTICAL ASPECTS OF EHV-1 AND EHV-4 DIAGNOSTICS

The authors summarise the pathogenesis, clinical findings and
diagnosis of equine herpesvirus-1 and 4 infection, with special regard to new research data which can be applied for performing fast and specific diagnostic methods.

The most important herpesviruses of horses are EHV-1 and EHV-4, members of Alphaherpesvirinae subfamily. EHV-4 usually causes severe respiratory signs, while EHV-1 infection can cause serious economic losses through the abortion of pregnant mares and neurological disorders. The herpes-specific latency can also occur among infected horses, these animals serve as a reservoir of the virus.

The infection with EHV-1 or EHV-4 can be detected with indirect (antibodies raised against the virus) and direct (virus or DNA of the virus) diagnostic methods. When clinical signs occur, applicability of serological methods is limited; therefore the role of direct virus isolation, especially with molecular methods [polymerase chain reaction (PCR)] is increasing. A single nucleotide polymorphism (SNP) in ORF30 region of the EHV-1 genome is strongly associated with the neuropathogenic attributes of the virus strain. A new real-time PCR method is developed at the Virology Department of AO VDD which can help in distinguishing the neuropathogenic and non-neuropathogenic genotypes of EHV-1.

J. Paréj – L. Pongrácz – Á. Bali Papp:

**REPRODUCTION EFFICIENCY OF THOROUGHBRED MARES AND THE FACTORS INFLUENCING IT**
The reproductive rate of different horse breeds has grown largely in line with improvement in keeping and nutritive conditions and development of the techniques. Thoroughbred is an exception, in this breed, the reproductive rate has not grown considerably. The average pregnancy rate (per season pregnancy rate) is between 83.9% and 92.2%, while the foaling rate is between only 60.8% and 82.6%. The difference of pregnancy rate and the foaling rate is caused by failure of the conception, but mainly the failure of the birth (pregnancy loss) and this rate can achieve even 20%. Due to the big difference, the factors influencing them can not be ignored. The authors review the effects of the mare’s age, condition and reproductive status on the basis of the literature. The results of the effect of the age and the condition are mostly concordant according to the literature but contradictory search results were found about the effects of the mare’s status and racing past. Data relating to the frequency of twin pregnancy and the length of the pregnancy were studied, where different results were found, as well. A comprehensive survey in Hungary is considered necessary.


EXAMINATION OF OVARIAN FUNCTION, THE CONCEPTION AND THE EMBRYO LOSS OF EWES IN OUT-OF-SEASON REPRODUCTIVE PERIOD

The authors examined the ovarian function of Prolific Merino sheep
breed by hormone-analytical methods in spring and early summer. Blood plasma progesterone level was measured for following up the ovarian function; examining the reaction of ewes for cycle induction methods, rate of conception and the process of pregnancy, respectively. Laparoscopic artificial insemination and ultra-sound pregnancy control were applied. According to the results, the cycle induction was very effective for Prolific Merino in out-of-season reproductive period. The Ovitrace sheep feed supplementary can be used to reduce embryo loss.

P. Hajdú – B. Gyulay-Nagy – J. Gál – Cs. Jakab:
A CASE OF PRIMARY UTERINE MYXOSARCOMA WITH GENERALIZED METASTASIS IN RABBIT. PATHOLOGICAL CASE REPORT

The authors present a case of primary uterine myxosarcoma in a 4-year-old, overweight, gray-coloured mixed breed female rabbit carcass, which was found during pathological examination. The malignant mesenchymal tumour developed from the left uterus and made paratumoural solitary metastasis in the broad ligament of the uterus, and distant multiple metastases in the visceral peritoneum, and lungs. The histopathological examination of both the primary and secondary tumours showed increased tumour-induced neoangiogenesis, extensive haemorrhage and necrosis. In the obese rabbit severe pathological necrobiotic fatty liver, atrophy and lipomatosis of the pancreas, furthermore liponecrosis in the omentum were observed. The primary
and secondary tumours showed vimentin positivity, and pancytokeratin-, α-SMA-, claudin-5 negativity. The Ki-67 labelling index exhibited 18%. The authors assumed that the causes of the disseminated intravascular coagulopathy in the rabbit were the extensive haemorrhage, necrosis of the tumours, tumour-induced liponecrosis of the omentum and ketosis.

M. Marosán – E. Vecsera – J. Gál:

**CONSEQUENTIAL OBSTIPATION CAUSED BY AN INFERTILE EGG STUCK IN THE OVIDUCT CLOSE TO THE CLOACA IN KENyan SAND BOA (ERYX COLUBRINUS LOVERIDGEI)**

The authors present consequential obstipation due to infertile egg-retention in a 3.5 year old, 197 gram bodyweight, female, snow colour-type Kenyan sand boa (*Eryx colubrinus loveridgei*). The stuck infertile egg was removed in superficial anesthesia via the cloaca together with the faecal balls. The aftercare was 0.2 ml „Mastijet forte udder infusion A.U.V." for 6 consecutive days, administered through a probe into the cloaca.


**DIFFERENTIATION OF MALIGNANT FIBROUS HISTIOCYTOMA AND PLEOMORPHIC LIPOSARCOMA IN DOGS USING ANTI-S-100 PROTEIN ANTIBODY. IMMUNOHISTOCHEMICAL CASE REPORT**

The authors present malignant fibrous histiocytoma (MFH) and
pleomorphic liposarcoma (PLS) in dogs and the differentiation of the
tumours based on the use of anti-S-100 protein, anti-vimentin
immunohistochemical markers. They describe the clinicopathological
characteristics, detail the microscopic features and immunophenotype
of malignomas, based on different antibodies. Anti-S-100 protein
antibody, together with anti-vimentin, can help to distinguish malignant
fibrous histiocytoma from pleomorphic liposarcoma in dogs. Although,
there is only one case reported, this information is more important than
simple diagnosis. It is also very important for the clinicians for
prognosis and about the activity, which also has a therapeutic
significance. In their cases the positive response of liposarcoma with
anti-S-100 was a diagnostic marker, since this reaction is negative for
malignant fibrous histiocytoma.

A. Takács – L. Szemethy – A. A. Takács – P. T. Takács – M. Heltai:
DATA ON THE PARASITOLOGICAL STATE OF THE EURASIAN
BADGER (MELES MELES) IN HUNGARY

Survey of the parasitic worm infestation of 6 badgers from 5 Hungarian
hunting areas, as part of the National Monitoring Program of
Mammalian Predators was carried out in 1997–2003. Eight worm
species were identified: Taenia crassiceps, Taenia martis, Taenia sp.,
Mesocestoides lineatus, Ancylostoma sp. Capillaria aerophila,
Capillaria plica, Uncinaria criniformis.
Through 50 years of observations, the author followed the formation of the *Dactylogyrus* fauna of common carp in Hungary. Up until the middle of the 19th century, when intensive fish transfers began, the European common carp subspecies (*Cyprinus carpio carpio*) has been infected only by three *Dactylogyrus* species (*D. anchoratus*, *D. minutus* and *D. vastator*). The *Dactylogyrus* fauna of the Asian carp subspecies (*C. carpio haematopterus*), however, counted 10 *Dactylogyrus* spp. The first invading species was *D. extensus* which arrived in the European part of the former Soviet Union by the introduction of Amur wild carp. When Hungarian specialists began their work in 1960, only the above four *Dactylogyrus* spp. were infecting the Hungarian carp population. Due to the introduction of some specimens of Asian common carp and the repeated introductions of colour carp (koi) to Europe, this number grew during the years, and from the 10 *Dactylogyrus* spp. known from the Far East, nine species (*D. achmerowi*, *D. anchoratus*, *D. extensus*, *D. falciformis*, *D. minutus*, *D. molnari*, *D. mrazeki*, *D. sahuensis*, *D. vastator*) were observed in common carp in Hungary. From the previously mentioned species, the occurrence of *D. falciformis* and *D. mrazeki* was reported for the first time in Europe. Out of the
Dactylogyrus species originating from the Far East, *D. izjumovae* is the only one that has not been reported yet.

Among the found parasites, *D. anchoratus* and *D. vastator* are common parasites of common carp and crucian carp, whereas the other 7 *Dactylogyrus* species seem to be specific only to common carp. In addition to the *Dactylogyrus* spp., the occurrence of *Pseudacolpenteron pavlovskii*, a dactylogyrid sp. without anchors, was reported. The paper is illustrated with microscopic photos of sclerotic elements (anchors and the copulatory organs), generally used as keys for identifying dactylogyrid monogeneans.

L. Solti:

**POTENTIALS AND LIMITS OF REPRODUCTIVE-BIOTECHNOLOGY – COUNTER – ARGUMENTS**

Recent developments in the biology led to enormous results in the reproductive medicine often referred to as assisted reproductive technology (ART). This article is dealing with three methods that are available for the human and veterinary medicine but – mainly in the human – generate several ethical concerns, as well. The first method discussed here is the in vitro fertilisation (IVF) which so far resulted in birth of more than 4 million children and brought a real breakthrough into the fight against human infertility. At the same time it is still not clear completely which conditions mean the technical and ethical limits of this technology. Even more discussed is the somatic cell cloning
which is allowed for therapeutic purposes only but forbidden to use for reproductive aims. The last issue in this article is the sex-selection of newborn babies or animal offsprings which at least from technical point of view is available, and the animal husbandry uses this procedure more and more, but in the human medicine there are big debates about its benefits. Prior to large scale introduction there is a need for intensive social and ethical discussions analysing its potential risks or benefits for the mankind.