ISSN 2706 - 1795

OCTOBER 10TH - 12TH 2019 • ZAGREB • CROATIA

8TH INTERNATIONAL CONGRESS "VETERINARY SCIENCE AND PROFESSION"

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ISSN 2706 - 1795

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## FETLOCK JOINT CARTILAGE LESIONS IN WORKING HORSES – A PILOT STUDY

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The horse is still used as a working animal, harnessed in a sled or wheeled chariots loaded with cargo several times heavier than the horse itself. There are no data on the extent of cartilage lesions in the fetlock joints of front and hind legs of working horses. The aim of the study was to determine the size and position of gross cartilage lesions in front and hind metacarpo-phalangeal (fetlock) joints of working horses.

Front and hind legs were collected from a local abattoir after the working horses were slaughtered for the reasons not related to this study. The study was conducted on eight horses from 5 to 12 years old (mean 8.625 ± 0.91 years), with a body weight of 550 ± 29.46 kg. Thirty-two fetlock joints were examined for external gross anatomy changes. After joint dissection, the cartilage of metacarpal and metatarsal bones was stained with blue ink and photos were taken. The cartilage lesions were stained deep blue, in contrast to light blue surface of the undamaged cartilage. The anatomical position of the lesions was recorded. The ImageJ software was used to measure the total surface of the cartilage and the surface of the cartilage under the lesions. The dimension of the lesions was expressed as a percentage of the total cartilage surface and presented as mean ± standard error.

Gross anatomy changes like skin lesions, wounds, joint oedema or any type of deformities were not observed. The position of the cartilage lesions was symmetrical and occupied lateral and medial metacarpal and metatarsal condyles next to the sagittal ridge. The lesions on the lateral condyles had the same surface area like those on the medial, 12.3 ± 1.03% versus 10.7 ± 0.99%, respectively. The cartilage lesions on the front legs (23.62 ± 1.68%) were broader than those on the hind legs (22.5 ± 3.35%).

The results of this pilot study indicate no difference between metacarpal and metatarsal cartilage surface lesions. Further studies are indicated to determine the severity of cartilage and putative subchondral bone lesions by histologic evaluation.