

### MULTILOCLAR LIVER CYSTS IN OLD-AGED CHAMOIS (*RUPICAPRA RUPICAPRA*) IN AUSTRIA

WALTER GLAWISCHNIG<sup>1,3</sup>, and ZOLTAN BAGO<sup>2</sup>

<sup>1</sup>Institute for Veterinary Disease Control Innsbruck, Austrian Agency for Health and Food Safety, Technikerstrasse 70, A-6020 Innsbruck, Austria; <sup>2</sup>Institute of Veterinary Disease Control Moedling, Austrian Agency for Health and Food Safety, Robert-Kochgasse 17, A-2340 Moedling, Austria; <sup>3</sup>Corresponding author (e-mail: walter.glawischnig@ages.at)

Unknown liver alterations were diagnosed in twelve adult free-living chamois (*Rupicapra rupicapra*) originating from alpine regions in the western part of Austria. The animals (eight female, four male), all in advanced age (average 13 years old) were killed by local hunters most of them because of emaciation or abnormal behaviour. The liver of the animals was severely enlarged and contained thin walled multiple cysts of various sizes filled with serous, amber fluid. No evidence for parasites was found in the cysts. Furthermore there were no cystic lesions present in other organs of the carcasses.

Histologically, the cysts were lined by a single layer of flattened or low cuboidal epithelium giving evidence for their biliary origin. Except in one case no fibrosis was found in the surrounding liver tissue. In some cases signs for inflammation and tissue damage caused by parasites suggest that the cysts could be a result of parasitic migration in the liver of old-aged chamois. Although nothing is known regarding heredity, these morphological findings can also indicate an adult type of polycystic disease. To our knowledge, this is the first report describing multilocular liver cysts similar to polycystic liver disease in this species.

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### THE PREVALENCE OF CONGENITAL UMBILICAL HERNIA IN COMMON BOTTLENOSE DOLPHINS (*TURSIOPS TRUNCATUS*) IN THE ADRIATIC

TOMISLAV GOMERCIC<sup>1,4</sup>, MARTINA DURAS GOMERCIC<sup>2</sup>, HRVOJE LUCIC<sup>2</sup>, ANA GALOV<sup>3</sup>, DARINKA SKRTIC<sup>2</sup>, SNJEZANA CURKOVIC<sup>2</sup>, SNJEZANA VUKOVIC<sup>2</sup>, and HRVOJE GOMERCIC<sup>2</sup>

<sup>1</sup>Department of Biology, Faculty of Veterinary Medicine, University of Zagreb, Heinzelova 55, Zagreb, Croatia;

<sup>2</sup>Department of Anatomy, Histology and Embryology, Faculty of Veterinary Medicine, University of Zagreb, Heinzelova 55, Zagreb, Croatia; <sup>3</sup>Department of Animal Physiology, Faculty of Science, University of Zagreb, Rooseveltov trg 6, Zagreb, Croatia; <sup>4</sup>Corresponding author (e-mail: tomlav.gomercic@vef.hr)

Congenital umbilical hernia is a malformation of the ventral abdominal wall of animals and humans. In terrestrial species, such malformation causes death in-utero or soon after birth. To our knowledge there are no data on the incidence of this malformation in the bottlenose dolphins (*Tursiops truncatus*) in the literature. In humans, the congenital umbilical hernias appear in 3.5 out of 10,000 cases of normal births. The bottlenose dolphin is the only resident marine mammal species in the Croatian part of the Adriatic Sea, with an estimated number of around 200 adult individuals and around 20 cubs living in the area. It is estimated that between 15 and 20 bottlenose dolphin births occur there annually. We examined 123 carcasses of bottlenose dolphins found in the Croatian part of the Adriatic Sea since 1990. The congenital umbilical hernia was found in 13 cases (five of them were either fetuses found in uteruses of dead mothers or aborted fetuses; while 8 were born alive and lived for various periods of time). The estimated total number of births of bottlenose dolphins in the Croatian part of the Adriatic Sea since 1990 is between 270 and 360. This means that congenital umbilical hernia appears in between 361 and 482 out of 10,000 cases of normal births of bottlenose dolphins in the Adriatic. Our findings indicate that the incidence of congenital umbilical hernia in the Adriatic bottlenose dolphins is more than 100 times higher than that recorded in humans. The cause of such high incidence in the bottlenose dolphin remains unknown. Our future research will focus on determining a degree of relatedness among affected animals using molecular markers, in which we would test the hypothesis of the genetic basis of this malformation in the bottlenose dolphin. Furthermore, we do not know whether such high incidence of congenital umbilical hernia is found only in the Adriatic population of the bottlenose dolphin, or is it inherent to the bottlenose dolphin species.

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