

Department of Pathology, College of Veterinary Medicine, Kyungpook National University, 702-701, #1370, Sangyeok-dong, Buk-ku, Daegu City, Republic of Korea  
Phone +82+53+950+5975, Fax: +82+53+950+5955, E-mail jeongks@mail.knu.ac.kr

## P#54

### Degenerative Pilomatrixoma in a Canine

Jae-Yong Chung, Sun-Hee Do, Da-Hee Jeong, Il-Hwa Hong, Young-Jin Ko, Hyo-Jin Lee, Chul-Soong Park, Joung-Hoon Shin, Tae-Hwan Kim and Kyu-Shik Jeong\*

*Department of veterinary pathology, College of veterinary medicine, Kyungpook National University*

Female maltese dog, which is 12 years old, is showed left shoulder skin mass from 2 years ago. We obtain two mass specimens surgically. Specimens are showed 15×26mm diameter / oval form and 12×15mm diameter / round form respectively. Specimens are showed chalky, granular, multilobulated, and well-demarcated keratinized dermal tumor in gross examination. Specimens are fixed in formalin and stained by hematoxylin-eosin. The cyst wall is composed of multiple layers of basaloid cells, showing a degeneration to form the nuclear lamination of ghost cells. Some region shows mineralization of ghost cells. No inflammatory reaction is found in this case. Dermal adnexa were normal feature except significant dilation of apocrine glands with peripheral neovascularization. We diagnosed a pilomatrixoma, fully developed stage.

\*Corresponding Author : Professor, Kyu Shik Jeong, D.V.M., Ph.D.,

Department of Pathology, College of Veterinary Medicine, Kyungpook National University, 702-701, #1370, Sangyeok-dong, Buk-ku, Daegu City, Republic of Korea  
Phone +82+53+950+5975, Fax. +82+53+950+5955, E-mail: jeongks@mail.knu.ac.kr

## P#55

### TGF- $\beta$ and p-Smad2/3 Mediated Hepatocyte Apoptosis Increase in HCV-core Protein Mutation Mice by Active Alcohol Consumption

Dong-Hyung Noh<sup>(1)</sup>, Sun-Hee Do<sup>(1)</sup>, Won-Il Jeong<sup>(1)</sup>, Sang-Joon Park<sup>(1)</sup>, Jae-Yong Chung<sup>(1)</sup>, Da-Hee Jeong<sup>(1)</sup>, Il-Hwa Hong<sup>(1)</sup>, Dong-Hwan Kim<sup>(1)</sup>, Tae-Hwan Kim<sup>(1)</sup>, Dae-Yeul Yu<sup>(2)</sup> and Kyu-Shik Jeong<sup>(1)</sup>

<sup>(1)</sup>*Department of Veterinary Pathology, College of Veterinary Medicine, Kyungpook National University, Daegu, Republic of Korea, and*  
<sup>(2)</sup>*Korea Research Institute of Bioscience and Biotechnology, Daejeon, Republic of Korea*

It has been demonstrated that hepatitis C virus (HCV)-core protein regulates transcriptionally cellular genes, as well as cell growth and apoptosis and alcohol consumption in persons with chronic HCV infection is associated with advanced liver disease, including cirrhosis. Transforming growth factor-beta (TGF- $\beta$ ) is a pleiotropic cytokine implicated as a pathogenic mediator in various liver disease. In this study, we evaluated the relationship between alcohol consumption and hepatocyte apoptosis in

transgenic mice of HCV core protein with variable core mutant gene. Liver tissues from non-Tg group (NTG, n=11), core wild-Tg (TG-K, n=11), mutant core 116-Tg (TG-116, n=11), and mutant core 99-Tg (TG-99, n=11) were examined for TGF- $\beta$  induced apoptosis in hepatocytes. Active ethanol consumption led to a significant increase in hepatocyte apoptosis. Especially TG-99, expression of the mutant core gene whereby serine-99 was substituted with glutamine (mutant serine(S)  $\rightarrow$  glutamine(Q)), significantly increased cytoplasmic immunoreactivities for CK8/18, TGF- $\beta$ 1, p-Smad2/3 and p21 in hepatocytes around the centrilobular area with concomitant degenerative changes. Programmed cell death can be further up-regulated by active ethanol consumption in hepatocytes of HCV leads apoptotic cell death. The activation of TGF- $\beta$ 1 and p-Smad2/3 and interaction with p21 signaling pathway is the major mechanism for HCV-induced hepatocyte apoptosis.

\*Corresponding Author :Professor, Kyu Shik Jeong, D.V.M., Ph.D.,

Department of Pathology, College of Veterinary Medicine, Kyungpook National University, 702-701, #1370, Sangyeok-dong, Buk-ku, Daegu City, Republic of Korea

Phone: +82+53+950+5975, Fax: +82+53+950+5955, E-mail jeongs@mail.knu.ac.kr

## P#56

### Differential Diagnostic Markers for Canine Trichoepithelioma

Mi-Na Seo, Da-Hee Jeong, Sun-Hee Do, Jae-Yong Chung, Seong-Joon Jang and

Kyu-Shik Jeong\*

*Department of Veterinary Pathology, College of Veterinary Medicine, Kyungpook National University, Daegu 702-701, Republic of Korea*

Trichoepithelioma(TE) is an uncommon skin condition occurred with single or multiple lesion after puberty. It is very uncommon condition in animals with forming rudimentary hair follicles without actual hair shafts and the only way for treatment is surgical excision. It can be confused with basal cell carcinoma(BCC) both clinically and histologically features, especially in small biopsies. Therefore, several attempts have been made to identify immunohistochemical differences between these entities in medical science, but none in veterinary medicine. A 8-year-old female poodle was referred for nodules sized 1cm diameter on dorsal side of the elbows which has arisen few months ago. Each nodules had different gross findings and did not cause subjective symptoms but there were hemorrhagic on both nodules. The skin was biopsied for pathological diagnosis. Recently, bcl-2 and CD34 have been reported as reliable markers in distinguishing the different two types of tumor. We underwent immunostaining in 1 canine TE and 1 canine BCC with bcl-2 and CD34. TE showed positive staining pattern in bcl-2 while BCC showed negative. With CD34, TE and BCC both showed negative stainings. Therefore, bcl-2 have possibility as a marker used to differentiate TE from BCC not only in human but also in canine. And immunohistochemical differential diagnosis between TE and BCC needs further studies with many cases and antibodies in veterinary medicine.