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**Pathomorphological and immuohistochemical evaluation of Mooren's ulcer in a cat**

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**Introduction:** Mooren's ulcer is a corneal disease which suddenly appeared and continued progressively. Peripheral cornea is initially affected and painful, ulcerative keratitis with painful is developed. And, it may spread to central of cornea. The pathogenesis of the disease can be still not quite understood. There are some evidences related to both cell-mediated and humoral components in humanbeings. In the case, the aim was to show progressive ulcer using pathomorphological and immunohistochemistry.

**Materials & Methods:** An 1 year-old mix breed cat were submitted to clicnic with complaints of progressive painful and eyesight loss in left eye. An incurable ulceration with haemorrhagia was detected in the cornea. The eye was extirpated. Cornea was fixed, processed routinely, embedded in parafin and stained with Hematoxyline-Eosin. Then, immunperoxidase (ABC-P) method was applicated to sections by using CK3-12, EPGF, vimentin, A1AC markers. TUNEL metohod was applicated to show apoptosis.

**Conclusions:** Macroscopically, there was 1 cm in diameter ulceration at cornea. There were opasification and old haemorrhagic areas at periphery. Histopathologically, there were wide ulceration at all layers and vacuolar degeneration at suprabasal cells. In stroma, numerous neutrophiles and lymphocytes were infiltrated. Neovascularisation and fibrosis begining from limbus were also present. Immunohistochemically, CK3-12 marking suprabasal and basal cell regeneration were not widespread. EPGF positivities were generally weak in epithelial cells. However, TUNEL reactions were present in the destructive and aging cells at periphery. In stroma, moderate vimentin positivities were detected proliferated fibrocytes originating from limbus. A1AC mildly reacted in neutrophiles. In conclusion, the case was described as Mooren's ulcer. It is identical to human counterpart. CK3-12 and EPGF expressions proved epithelial regeneration are not enough. TUNEL reaction showed apoptosis in ulcerative area. Vimentin and A1AC show continuing proliferation and inflammation in affected region. All results support that progressive Mooren's ulcers can be encountered in also cats.

**Biography**

Tuncer KUTLU has worked for Ministry of Food, Agriculture and Livestock between 2007-2011. He has assigned as Research Assistant to Department of Pathology, Faculty of Veterinary Medicine, Ankara University in 2012. He has been still working at same place since 2012. His PhD Thesis: "Comperative investigation of kidney lesions of canine and feline by pathomorphological and immunohistochemical methods". His main research areas are on neoplasia, pathomechanism of contagious disorders and experimental diseases in laboratory animals. He has been many experiences on special histochemical and immunohistochemical methods.

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