

Spontaneous microscopical lesions in Göttingen Minipigs

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Eighteen clinically healthy, microbiologically defined Göttingen Minipigs, reared under strict barrier conditions, were examined in a scheme covering both sexes and three different ages i.e., 3, 6, and 12 months. A total of 57 tissues from each animal, consistent with international guidelines for toxicological research, were sampled and examined by light microscopy.

The most common microscopical lesion was focal accumulations of mononuclear inflammatory cells in various tissues. Such infiltrates were primarily seen interstitially or paravascularly and only rarely in the parenchyma of the organs. They were observed in the following tissues. Adrenal glands, cerebrum (Fig. 1), epididymis, oesophagus, kidneys, liver, lung, mandibular gland (Fig.2), meninges (cerebral, cerebellar and medullar), parotid gland, rectum, stomach, testes, tongue, and vagina. Mononuclear cell infiltrates are commonly found in other species as well and may indicate a normal immunological potential.

Lesions apart from these can be found listed in the table and selectively presented in the photomicrographs. The distribution of the lesions according to sex and age of the animals was not statistically significant.

The nature of most inflammatory lesions were suggestive of a focal traumatic or non-specific infectious aetiology. Iron deposition was probably caused by preventive iron administration, and was consistent with findings in previous studies in the Göttingen Minipig, where the amount of iron deposition has been shown to correlate with the dosage of iron-dextran. The epithelial changes in the oesophageal part of the stomach was similar to lesions observed in domestic swine, where the incidence of hyperkeratosis is related to the feeding of finely ground rations and pelleted feed.

Although this material should be regarded as a sample only, the findings indicate that spontaneous lesions in microbiologically defined Göttingen Minipigs held under strict barrier conditions are generally of a mild and focal nature.

Organ	Lesion	Incidence
Colon	Focal lymphoid follicle necrosis	2
Eye	Focal retinal dysplasia (Fig. 3)	1
	Focal lymphocytic keratitis	4
	Focal superficial keratitis	1
Kidney	Iron deposition (Fig. 4)	10
	Focal chronic interstitial nephritis	1
	Subcapsular granuloma (Fig. 5)	1
Liver	Iron deposition	9
Lung	Vacuolated alveolar macrophages (Fig. 6)	2
Mammary gland	Focal, mild thelitis	3
	Exudative galactophoritis (Fig. 7)	1
Mandibular Inn.	Focal eosinophilic inflammation	1
	Iron deposition	13

Mesenteric Inn.	Iron deposition	1
Ovary	Follicular cyst	1
Prostate	Epithelial sloughing Focal prostatitis (Fig. 8)	2 1
Skeletal muscle	Focal myocyte necrosis (Fig. 9)	1
Skin	Periocular hyperkeratosis and exudation (Fig. 10)	3
Spleen	Focal follicular necrosis	1
Stomach	Hyper-/parakeratosis (Fig. 11) Microabscessation Focal necrotizing arteritis (Fig. 12) Focal perivasculitis	15 3 1 2
Thoracic duct	Granuloma	1
Tongue	Focal dyskeratosis	1

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