Eosinophilic collagenolytic granuloma in a horse

V. Rama Devi[1], Marion Hewicker-Trautwein[2] and B. Rohlmann[3]
Department of Pathology
School of Veterinary Medicine, Hannover, Germany

Devi V. Rama, Hewicker-Trautwein, Marion and Rohlmann B (2006). Eosinophilic collagenolytic granuloma in a horse. Indian J. Vet. Pathol., 30(2): 54.

The eosinophilic granuloma is a common equine dermatosis and the most common non-neoplastic nodular skin disease of the horse[4]. Equine eosinophilic granuloma with collagen degeneration is seen most commonly in warmer months and has no apparent age, breed or sex predilections. Single or multiple lesions, most commonly occur on the back, withers and neck[3]. The lesions are usually rounded, well circumscribed, firm, non-alopecic, non-ulcerative, non-painful and non-pruritic. In the present paper, a case of eosinophilic collagenolytic granuloma in the scrotum of a horse, an unusual location, is described.

A male castrated horse aged about 7 years was brought to the Veterinary Clinic with a history of slowly growing, nodular lesions on the scrotal skin in the area of castration wound since three months. On examination, one large and 3 to 5 smaller nodules were noticed. The large nodule was 2 x 3 cm in size. They were easily excised with proper wound healing and without recurrence. The tissue sample was sent in 10% formalin for histopathological examination to Department of Pathology, School of Veterinary Medicine, Hannover. The sample was processed routinely by paraffin embedding and sections were cut and stained with Haematoxylin and Eosin (H&E).

Histopathological examination revealed the presence of nodular areas of eosinophilic, granulomatous inflammation in the dermis (Fig. 1). The granulomas showed densely eosinophilic material, known as flame figures, that represent remnants of fragmented collagen bundles and degenerated eosinophils (Fig. 2). The granulomas were surrounded by numerous eosinophils, macrophages, few epithelioid cells and lymphocytes. The lesions noticed in the biopsy sample of scrotum were in accordance with the eosinophilic granulomas noticed on the back, withers and neck[4]. Flame figure formation is thought to result from eosinophilic necrosis of collagen[5], but the etiopathogenesis of eosinophilic granuloma is unknown and probably multifactorial[4]. As the lesions, most commonly occur in spring and summer, insect hypersensitivity has been suspected [1,2,3]. As the lesions occur commonly in the saddle region, trauma has been suggested as an inciting cause. Some horses developed eosinophilic granulomas at the injection sites when standard silicone-coated needles were used [4,5,6]. In the present case, the aetiology could be attributed to insect hypersensitivity, as there was no evidence of trauma at the site of the lesions.

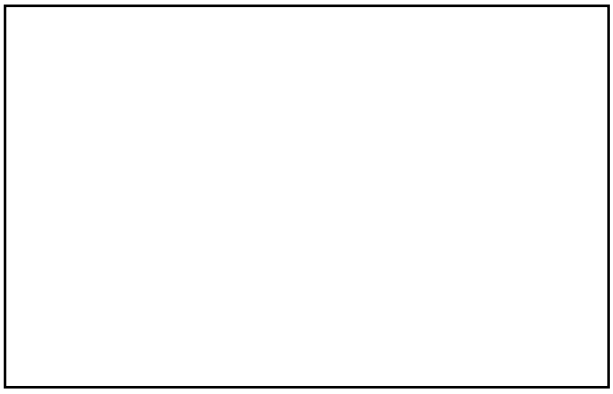

Fig. 1: Nodular area of eosinophilic, granulomatous inflammation in the dermis. H&E x 25.

Fig. 2: Eosinophilic granuloma showing flame figures. H&E x 200

[1]Present address: Assistant Professor and Head, Dept. of Pathology, N.T.R College of Veterinary Science, Gannavaram, A.P.; [2]Professor, Department of Pathology, School of Veterinary Medicine, 30559 Hannover, Germany; [3]Clinician, Tierarztliche Klinik, Grosse Strasse 101, D-28870, Ottersberg, Germany.

Mason KV (1993). Clinical and pathophysiological aspects of parasitic skin diseases. In: *Advances in Veterinary Dermatology* II. Ihrke, P.J (ed). Pergamon Press, New York, p.177.

Mathison PT (1995). Equine nodular dermatoses. *Vet. Clin. N. Am. Equine Pract.* **11**(1): 75-89.

Scott DW (1988). *Large Animal Dermatology*. Darlene Pederson (ed), W.B. Saunders Co, Philadelphia. pp.399-403.

Scott DW and Miller WHJr (2003). *Equine Dermatology*, Elsevier Science, USA.

Scott DW, Miller WH and Griffin CE (2000). In: *Muller and Kirk's Small Animal Dermatology*,6th Edn. W.B.Saunders Co, Philadelphia.pp.1153-1155.

Slovis NM,Watson JL, Affolter VK and Stannard AA (1999). Injection site eosinophilic granulomas and collagenolysis in 3 horses. *J. Vet. Intern. Med.* **13**(6): 606-12.