

Prevalence of Bit-induced Dental and Interdental Pathology¹

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SUMMARY

The prevalence of bit-induced dental and interdental pathology has not been documented in the veterinary literature. To fill this gap, 66 skulls from domesticated horses in museum collections were studied and compared with 12 skulls from feral or Przewalski horses. 125 hemi-mandibles were evaluated for interdental pathology in the domesticated specimens and 78 (62%) exhibited periostitis. 114 hemi-mandibles were evaluated for dental pathology and 69 (61%) exhibited erosion of the second lower premolar. Both these lesions were caused by the bit. No such lesions were found in any of the 12 skulls from the feral or Przewalski horses. Only 8 (12%) of the domesticated skulls were free of bit-induced injury. 58 of the 66 domesticated skulls exhibited evidence of either dental or interdental pathology or both, a prevalence of 88%. As the author recognizes over 200 clinical signs of bit-induced pain in today's population of domesticated horses and has evidence of bit usage being responsible for 40 or more diseases, he predicts that the prevalence of bit-induced oral pathology in today's horses may also be high. Routine examination of horses' mouths for such evidence is recommended. The mouth is an especially sensitive part of the horse's anatomy. Intra-oral restraint with one or more metal rods inflicts pain, instills fear, and imperils the welfare and safety of horse and rider by triggering flight, fight and freeze reactions. Bit-induced pain also explains a common cause of many so-called idiopathic diseases. These include, negative pressure pulmonary oedema ('bleeding'), dorsal displacement of the soft palate, epiglottal entrapment and trigeminal neuralgia (the headshaking syndrome). As the bit is an oral foreign body that obstructs respiration at exercise, its use is physiologically contraindicated and counterproductive. As the bit inflicts unnecessary pain and injury its use is ethically questionable.

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