Horner's syndrome

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INTRODUCTION

Horner´s syndrome or Bernard-Horner syndrome is a clinical entity caused by the denervation of the efferent sympathetic pathway of the eye.

It can affect all animal species, being a regular veterinary visit of small animals.

The path of sympathetic nerve fibers that innervate the head is under study.

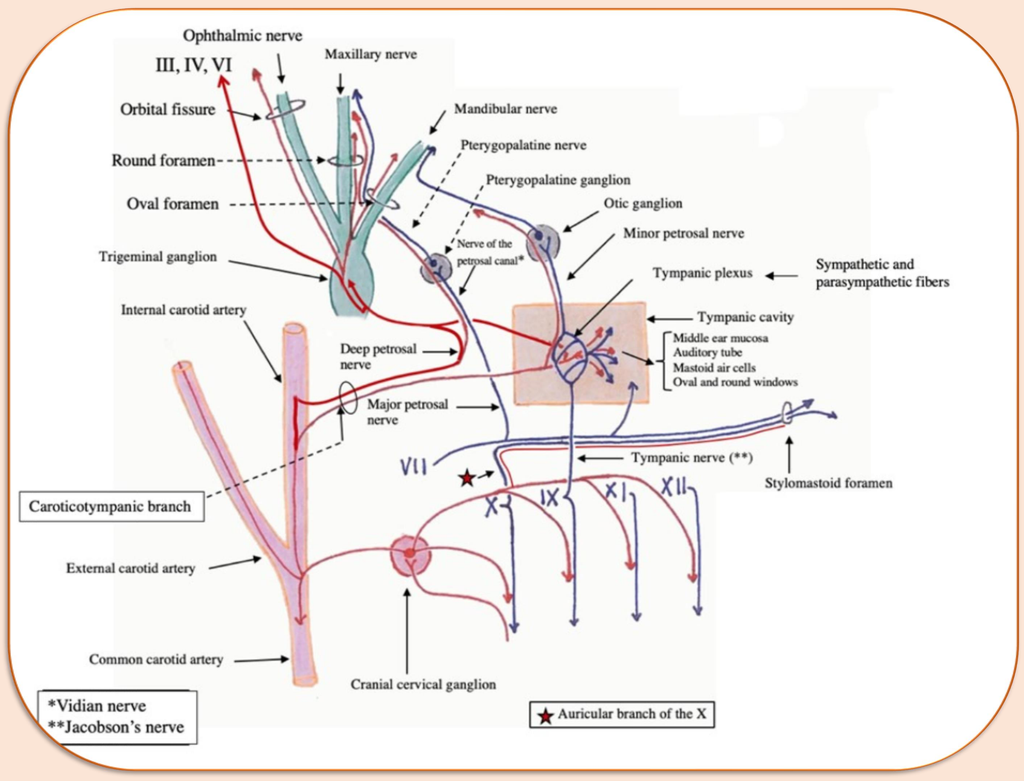
OBJECTIVES

Bibliographic review of possible routes of sympathetic innervation of the head and specifically the path of sympathetic fibers to the eye.

Description of Horner´s syndrome including the etiology, symptomatology, diagnosis, treatment and prognosis from cases and studies in different animals species.

CONCLUSIONS

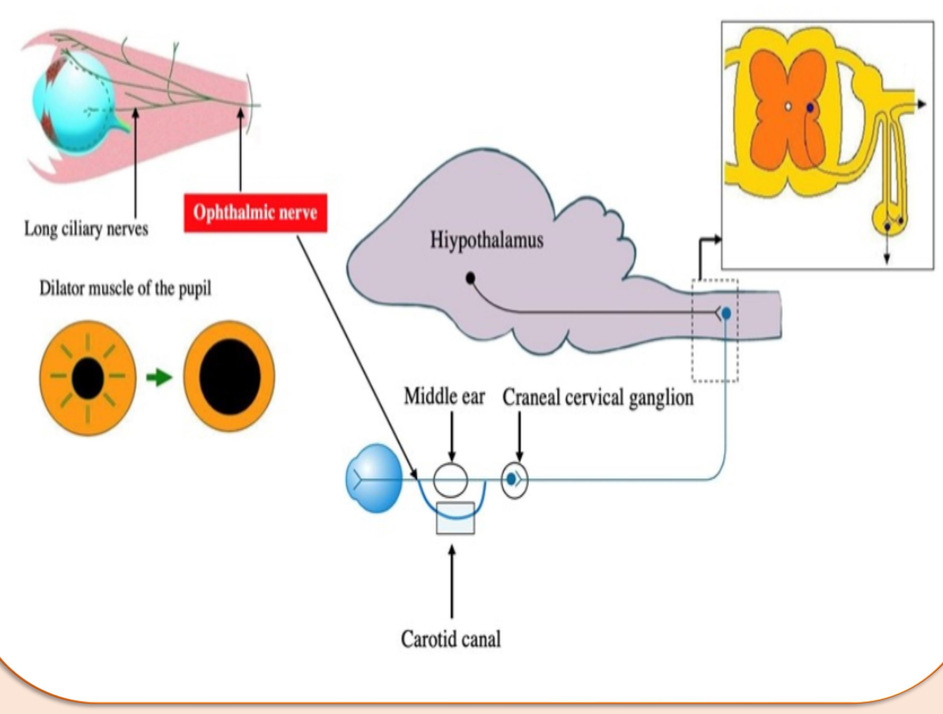
SYMPATHETIC INNERVATION OF THE HEAD



Distribution of nerve fibers trough the head

Distribution of sympathetic nerve fibers in the head. Our theory is that they should use the somatic nerve fibers as there is a mismatch between the development of the muscle and nerves, and the blood vessel development.

ROUTES OF THE SYMPATHETIC FIBERS TO THE EYE



Sympathetic pathway to the eye

Different routes described indicate how sympathetic fibers pass though the middle ear, so otitis media in any animal specie can cause Horner´s syndrome. In horses it occurs in guttural pouch infection.

HORNER´S SYNDROME

CLINICAL SIGNS

The symptoms generally include enophthalmia, small pupil (miosis), droopy upper eyelid (ptosis), and a prominent third eyelid. The signs differ according to species.

DIAGNOSIS

Lesions affecting the sympathetic supply to the head will result in Horner's syndrome.

An essential test when anisocoria is present is to assess that the pupil of the affected eye does not dilate in darkness to suspect Horner's syndrome.

Right Horner's syndrome in a cat

PHARMACOLOGICAL TESTING AND TREATMENT

Pharmacological testing can be used to confirm Horner's syndrome. Following topical use of 1 to 10% of phenylephrine demonstrates rapid resolution of signs.

Etiological treatment to correct the cause (e.g. Otitis), can resolve the clinical signs. However, in some cases, sequels may remain.

PROGNOSIS

The prognosis depends on the cause. Where no underlying cause can be identified (idiopathic Horner's syndrome), the prognosis is favorable, resolving spontaneously after months.