

Ectopic periorbital lymph node in a horse



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Purpose: To describe an ectopic periorbital lymph node in a horse.

Methods:

A ten-month-old French Warm-Blood filly was presented in January 2020 at the equine clinic of the University of Liège with a one month history of a periorbital non-painful mass (Fig.1). Differential diagnosis included neoplasm (lymphoma), glandular tissue, ectopic lymphoid tissue, cyst, abscess, hematoma or adipose tissue. Bilateral complete ophthalmic examination, fine needle aspiration and ocular and periocular of the right eye were performed. Following surgical excision, the mass was sent for histopathological analysis.

Results:

Examination

Complete physical examination was normal, no adenomegaly was noted.

Gross ophthalmic examination: a 3 x 2 cm, non-painful, subcutaneous, non-adherent, ovoid, smooth, firm mass was presented ventro-temporal to the right orbital rim. Skin overlying this mass appeared normal as well as the zygomatic arcade, with no evidence of orbital rim deformation.

Ophthalmic examination: no abnormalities on both eyes.

Ultrasound : the mass appeared as a hypoechoic, lobulated subcutaneous structure. No extension to the lacrimal gland nor other peripheral tissues could be seen.

Cytology : the smear showed a mixed lymphocytic cell population made up of small, intermediate and large sized lymphocytes and sparse mast cells. No abnormal mitotic activity was observed (Fig. 2.).

Surgery : Under general anesthesia, a longitudinal skin incision was performed over the mass. The mass was well encapsulated and easily dissected away from the skin and the underlying soft tissues (Fig. 3.). No adhesences to the adjacent tissues were encountered.

Histopathology : Examination revealed a tissue composed of a thickly encapsulated, markedly enlarged lymph node. Marked, chronic and diffuse lymphoid hyperplasia was noted with trabecular and capsular sclerosis and sinusoidal eosinophilia (Fig. 4). Analysis was consistent with a markedly chronically reactive lymph node.

Follow-up : No recurrence was reported one year after surgery.

Discussion:

Publications on ectopic lymph node are very sparse. To the best of our knowledge, only one case has been described in the veterinary literature. Necropsy of an eight-month-old heifer revealed an intracranial, extraneural ectopic lymph node (Clancy *et al.*, 2018). She died naturally following acute onset of lethargy, dyspnea and anorexia. A congenital abnormality was suspected.

In human medicine, two cases have been described. In 1977, Wolter and Roosenberg, described a 47-year-old woman with a lymph node localized in the lacrimal gland region of 20 years duration. There was no evidence of an inflammatory process or systemic illness as in our case. The second case described a 24-year-old female patient with an inflamed lymph node localized at the lateral side of the upper eyelid (Ahn *et al.*, 2018). For both cases, surgical excision was curative with no sign of recurrence.

In our case, migration of the parotid lymph node along the facial transverse artery has not been ruled out as ultrasound of its normal localization has not been performed.

Conclusion:

To the authors' knowledge, this is the first report of a periorbital ectopic lymph node in a horse. Ectopic lymph node should therefore be included in the differential diagnosis of periocular masses in young horses. Surgery was easily performed and was curative



Fig. 1, At presentation: A 3x2 cm, non-painful, subcutaneous, non-adherent, ovoid, smooth, firm, mass located ventro-temporal to the orbital rim

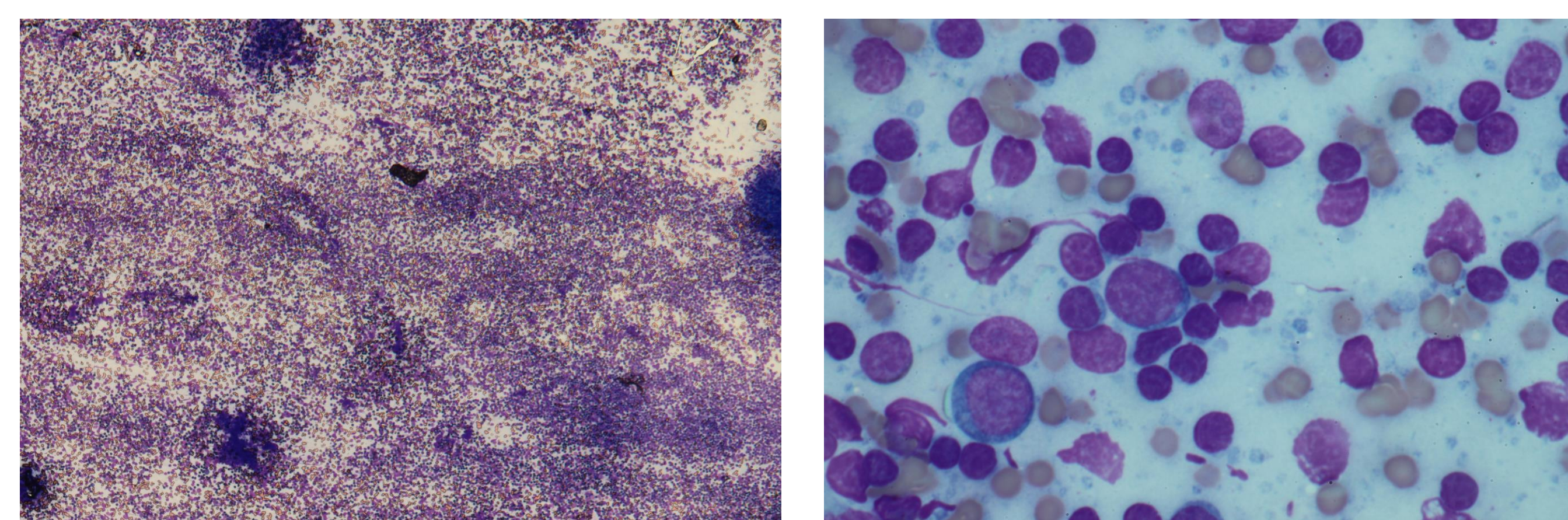


Fig. 2, Cytology: A, Rich smear with lymphoid cell population: small, intermediate and large sized lymphocytes (x100). B, Mixed lymphocytic cell population with centroblast, immunoblast and centrocytes (x1000)

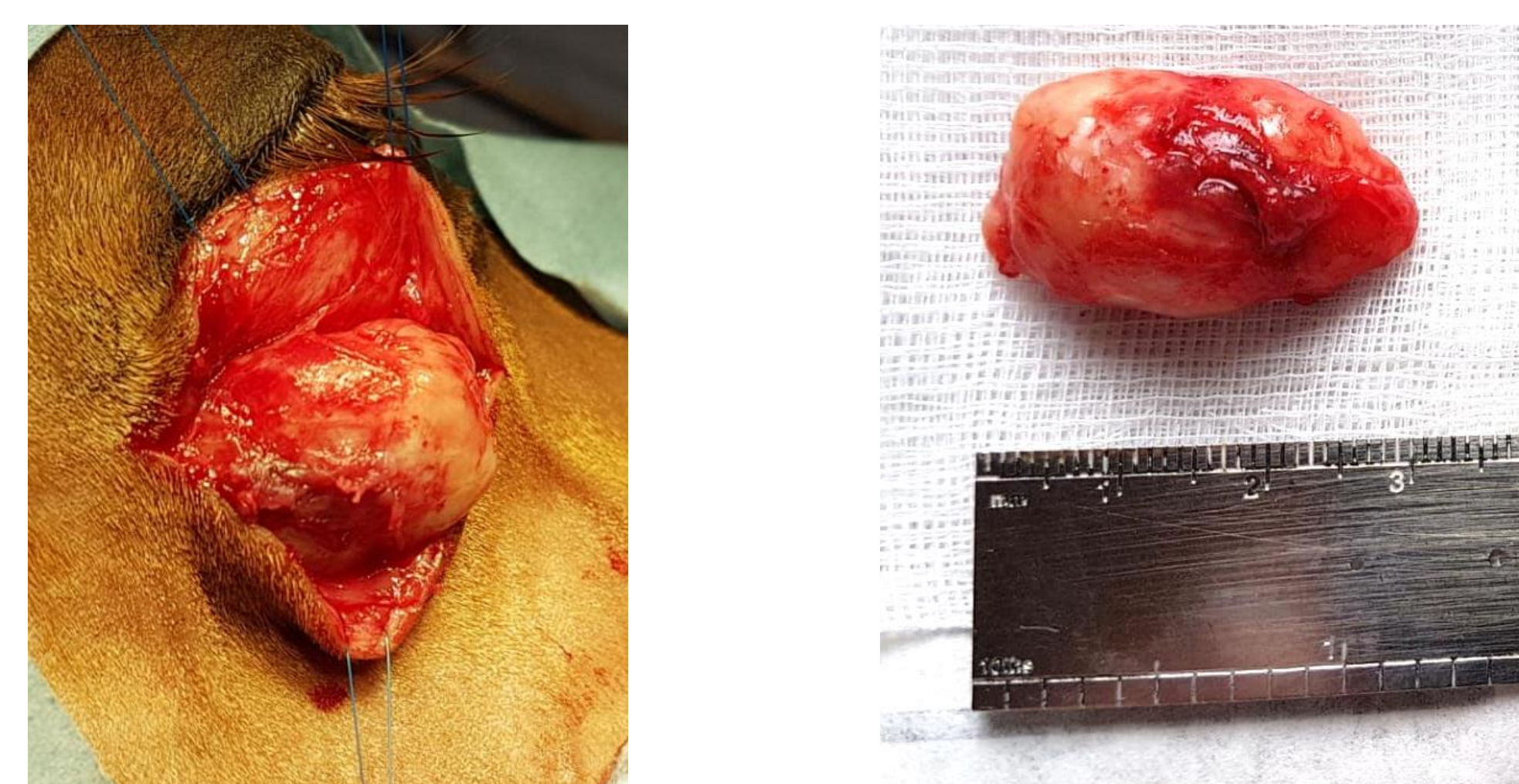


Fig. 3, Surgical procedure: Well encapsulated mass, easily dissected with no adhesences to the adjacent tissues.

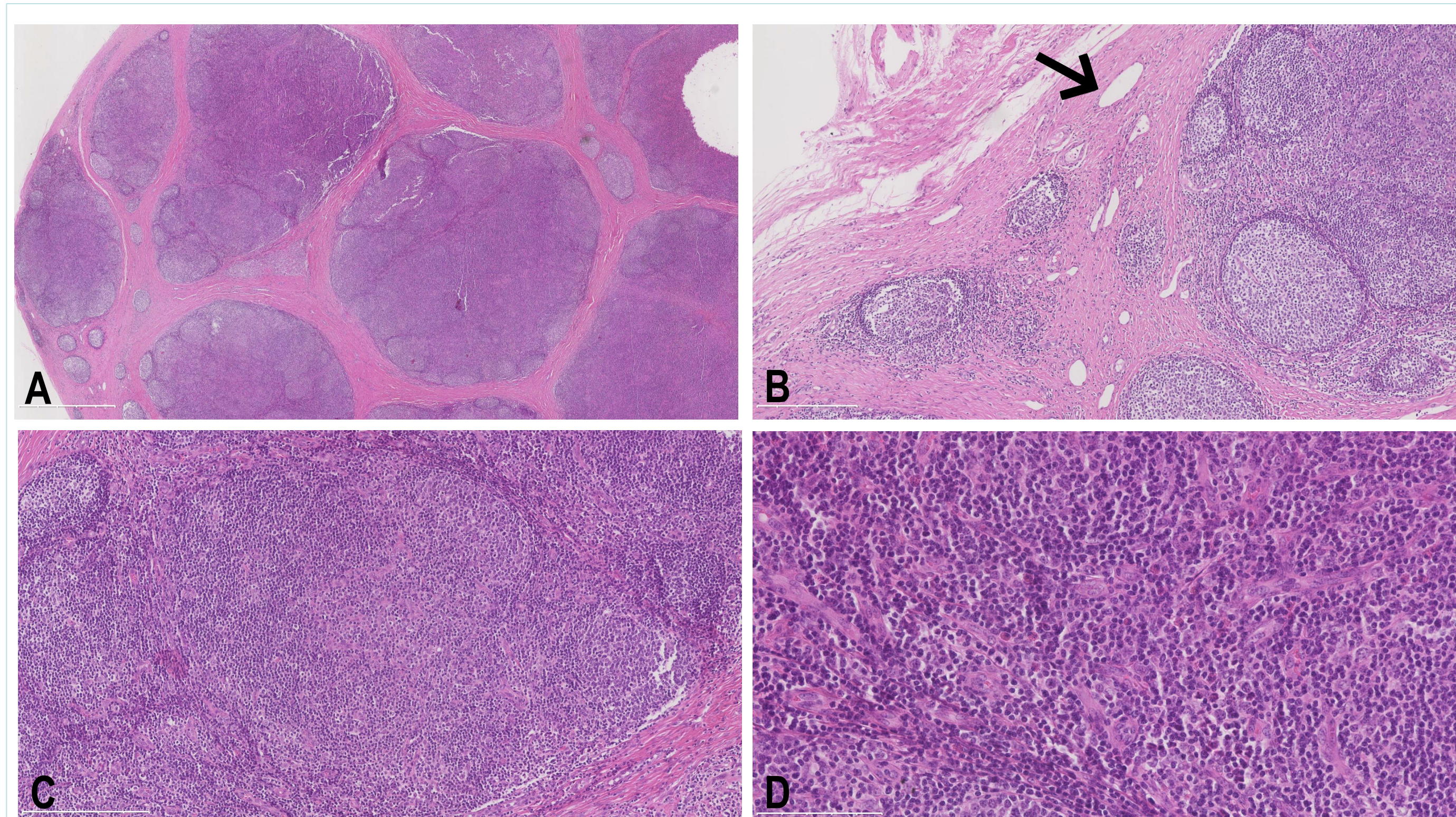


Fig. 4, Histopathology: A, General overview of the lymph node: marked capsular sclerosis and lymphoid follicle hyperplasia. B, Small lymphatic vessels (arrow) surrounding the hyperplastic lymphoid follicles. C, Hyperplastic lymphoid follicles. D, Eosinophilic infiltrates

References:

- Clancy CS, Van Wettere AJ, Hullinger GA. Intracranial, extraneural ectopic lymph node in a bovine (*Bos taurus*). *Anat Histol Embryol.* 2018;47:385–388.
Wolter J and Roosenberg R. Ectopic lymph node of the orbit simulating a lacrimal gland tumor. *Am. J. Ophthalmol.* 1977;83:908–914.
Ahn J, Park MH, Yoo JM, Seo SW. A case of orbital lymph node misdiagnosed as a dermoid. *J Korean Ophthalmol Soc.* 2018;59:672–675.