B-cell lymphoma in the tympanic bulla and renal involvement in a feline with peripheral vestibular syndrome

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INTRODUCTION

Lymphoma is the predominant neoplastic condition in felines; nevertheless, it represents an infrequent cause of vestibular syndrome (VS).

CASE REPORT

We present a case of VS linked to lymphoma originating in the tympanic bulla (TB), co-occurring with renal lymphoma in a neutered adult male mixed-breed cat weighing 3.5 kg and testing negative for retroviruses. The cat's primary issues included prolapse of the third eyelid, absence of the right eye's eyelid reflex, right head tilt, and ataxia. It had a history of external and middle ear otitis and persistent neurological symptoms over a three-month period. Magnetic resonance imaging (MRI) revealed the presence of TB content, bone erosion, and brainstem abnormalities. Otoscopy and myringotomy were recommended for microbiological analysis of the TB content, which confirmed the presence of Klebsiella pneumonia. Clinical examination uncovered further abnormalities, including Horner's syndrome, incoordination, anisocoria, lymphadenopathy, and irregular kidney shape. Ultrasonography confirmed enlarged kidneys and bilateral nephropathy. As the cat's condition worsened, a ventral osteotomy of the TB was performed to alleviate symptoms and collect material for histopathological, microbiological, and cerebrospinal fluid analysis. Polymerase chain reaction (PCR) evaluation for Toxoplasma gondii, Feline Coronavirus, FeLV/FIV, Cryptococcus spp., and Bartonella sp. all yielded negative results. Histopathology confirmed high-grade B-cell lymphoma in the TB. Immunohistochemistry of renal and TB biopsies confirmed the presence of diffuse B-cell lymphoid neoplasia (high grade), with positive staining for lineage markers CD20, PAX-5, Ki67, and B-cell activating protein. Despite initiating chemotherapy after the diagnosis, treatment proved unsuccessful, ultimately leading to the decision to euthanize the patient.

CONCLUSION

Despite initiating chemotherapy after the diagnosis, treatment proved unsuccessful, ultimately leading to the decision to euthanize the patient.

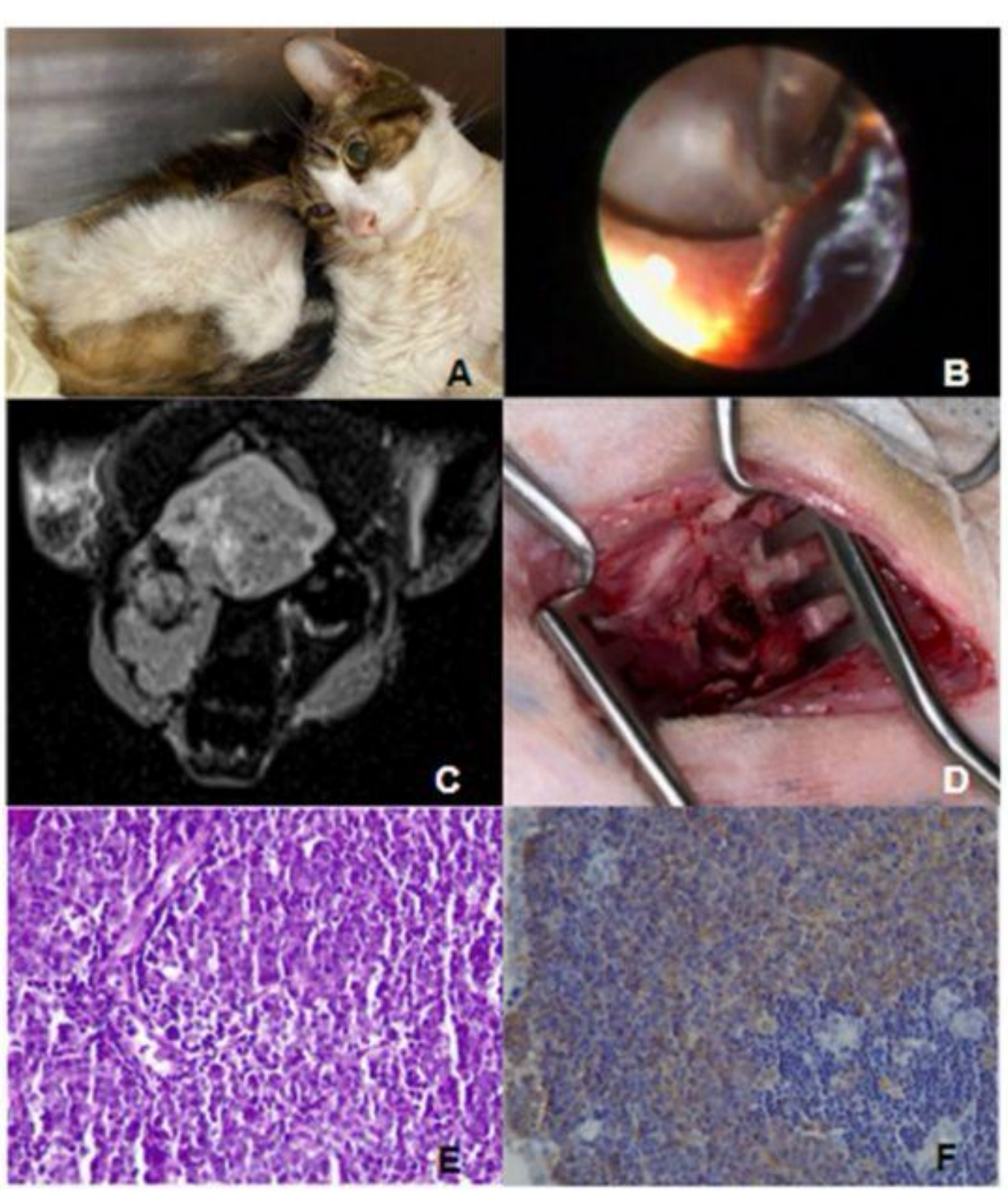

Figure 1: (A) Feline affected with lymphoma in the tympanic bulla, head tilt to the right and Horner syndrome with prolapse of the third eyelid. (B) Otoscopy image to perform an osteotomy to culture secretion from the tympanic bulla, notice purulent secretion at the time of the osteotomy. (C) Magnetic resonance image of feline skull with lymphoma in the tympanic bulla, observe the right tympanic bulla full of contents. (D) Photograph of the ventral osteotomy procedure of the tympanic bulla, note the opening region after fragment collection for histopathological analysis. (E) Immunohistochemistry image of material collected from the right tympanic bulla, showing morphological changes in the cells. Hematoxylin and eosin. (F) Immunohistochemistry image of material collected from the right tympanic bulla, showing lymphoid lineage of B cells, using CD20 marker.

REFERENCES