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Review Article

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PRIMARY NODAL LYMPHANGIOMA: A CASE REPORT WITH LITERATURE REVIEW

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ABSTRACT

Background: Lymphangiomas are rare, benign lymphatic malformations that can cause complications such as obstruction. **Case Presentation:** We present a 32-year-old male with no significant medical history, experiencing colicky abdominal pain and constipation for four days, leading to surgical exploration and the discovery of a mesenteric lymph node. **Histopathological Findings:** Microscopic examination revealed dilated lymphatic channels lined by attenuated epithelium, with reactive lymphoid hyperplasia and no evidence of malignancy. **Interpretation:** These features confirm a diagnosis of nodal lymphangiomas, emphasizing the need for timely intervention in symptomatic cases. **Conclusion:** This case highlights the importance of recognizing and managing lymphangiomas effectively to prevent complications.

INTRODUCTION

Lymphangiomas are uncommon, benign malformations of the lymphatic system that can occur anywhere on the skin and mucous membranes. Lymphangiomas can be categorized as deep or superficial based on the depth and size of the abnormal lymphatic vessels or as congenital or acquired. The deep forms of lymphangioma include two specific well-defined congenital entities: cavernous lymphangiomas and cystic hygromas.[1] Congenital lymphangiomas form due to blockage of the lymphatic system during fetal development, though the cause remains unknown. Cystic lymphangiomas are associated with genetic disorders, including trisomies 13, 18, and 21, Noonan syndrome, Turner syndrome, and Down syndrome.[2] Acquired lymphangioma circumscriptum occurs in association with chronic lymphedema that leads to disruption of previously normal lymphatic channels.[3]

Patients with lymph node lymphangiomas may present with a painless swelling in the affected area. Discomfort or pain can occur due to pressure on surrounding tissues. In pediatric cases, lymphangiomas are often diagnosed incidentally during imaging studies or physical examinations. Symptoms may also arise from secondary infections or complications associated with the lesion, making awareness of this condition crucial for timely diagnosis and intervention.[4]

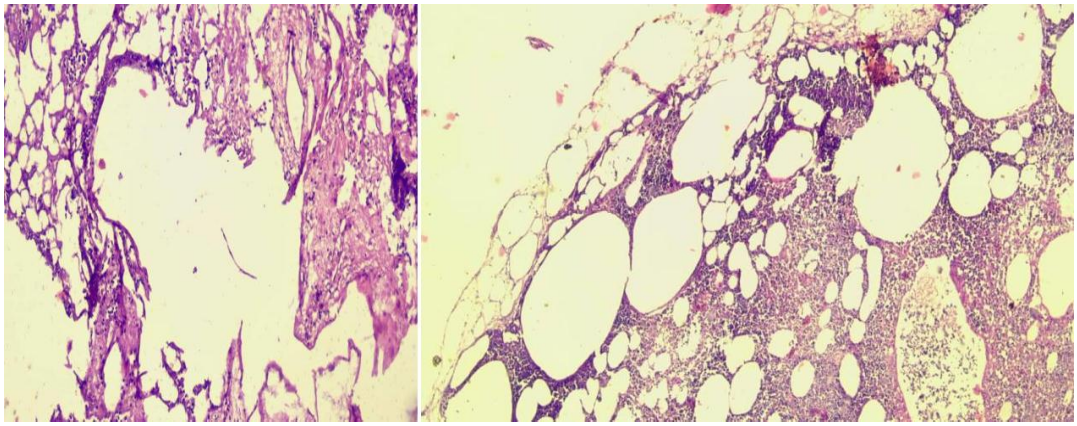
Management of lymph node lymphangiomas depends on factors such as the size, location, and symptoms associated with the lesion. Options include observation for asymptomatic cases or small lesions, surgical excision for symptomatic or larger lesions to prevent complications and improve cosmetic appearance, and sclerotherapy, where sclerosing agents are injected to promote closure of the lymphatic channels.[5] Each management approach should be tailored to the individual patient's condition and needs.

CASE PRESENTATION

A 32-year-old male with no significant medical history presented with a primary complaint of colicky abdominal pain and constipation that had persisted for four days. Upon clinical evaluation, the patient exhibited signs consistent with intestinal obstruction. Imaging studies suggested the presence of adhesions, leading to further surgical exploration, during which a mesenteric lymph node was identified.

Intraoperatively, two fragments of tissue were excised from the mesenteric lymph node, measuring approximately 3 cm x 1.5 cm x 0.5 cm. The surgical specimens were subsequently sent for histopathological examination. Microscopic analysis revealed fragments of lymph node structures displaying dilated channels of varying calibers, which were lined by flat and attenuated epithelium. Notably, these channels were found to be back-to-back in certain areas, interspersed with lymphoid cells. The background of the tissue showed evidence of reactive lymphoid hyperplasia, while no malignant cells were identified in the samples.

Overall, the histopathological features observed in this case were consistent with a diagnosis of nodal lymphangiomas.



A&B. The received specimen (H&E, 4x) Microscopic examination revealed dilated lymphatic channels lined by attenuated epithelium, with reactive lymphoid hyperplasia and no evidence of malignancy.

DISCUSSION

Lymphangiomas are rare, benign lymphatic malformations that can present in various forms and locations. This discussion will explore the similarities and differences between three cases, including the current case of a 32-year-old male with a mesenteric lymph node lymphangioma, a 20-year-old female with a thigh mass reported by Youssef et al.,[7] and a 56-year-old female with a vesiculobullous lesion on the lower lip described by Santos et al.[8]

All three cases share the common feature of being lymphangiomas, characterized by dilated lymphatic channels lined by endothelial cells. Each case also demonstrates that lymphangiomas can present in different anatomical locations, including the thigh, lower lip, and mesenteric region. In addition, the histopathological findings across the cases reflect reactive changes in the lymph nodes or surrounding tissues, such as lymphoid hyperplasia and vascular proliferation. This underscores a shared underlying pathology that involves the proliferation of lymphatic tissue and the body's reactive response to these abnormal structures.

Furthermore, all patients underwent surgical intervention, which is a critical component in the management of symptomatic lymphangiomas. The histological evaluations performed in each case confirmed the benign nature of the lesions, reinforcing the importance of accurate diagnosis to guide appropriate treatment.

Despite these similarities, notable differences exist in the clinical presentations and patient demographics. The current case involves a 32-year-old male with acute symptoms of colicky abdominal pain and constipation due to intestinal obstruction, highlighting a more urgent clinical scenario. In contrast, Youssef et al.'s case of the 20-year-old female presented as a gradually enlarging thigh mass, which may have led to a more chronic and asymptomatic course.[7] Santos et al.'s case, involving an older female with a longstanding vesiculobullous lesion, emphasizes how lymphangiomas can manifest in more superficial locations, potentially leading to delayed diagnosis due to their often painless and insidious nature.[8]

The imaging findings also varied among the cases. While the current case involved signs of intestinal obstruction and required exploratory surgery, Youssef et al.'s patient had an ultrasound that indicated a cystic mass,[7] and Santos et al.'s patient had a long-term vesicular lesion that warranted excisional biopsy.[8] These differences in presentation highlight the variability in clinical symptoms and the importance of imaging in guiding diagnosis and management.

Histopathological findings also differed slightly among the cases. In the current case, the lymphatic channels displayed a back-to-back arrangement, interspersed with lymphoid cells, while Youssef et al.'s case showed multiloculated cysts with a thin wall and focal smooth muscle disorganization.[7] Santos et al.'s report, while confirming lymphangioma, did not detail the specific histological characteristics as comprehensively.[8] This variability in histological presentation further illustrates the diverse morphological features that lymphangiomas can exhibit based on their location and the presence of associated reactive changes.

CONCLUSION

In summary, while all three cases illustrate the benign nature of lymphangiomas, they also highlight the diversity in clinical presentation, patient demographics, and histopathological features. These differences underscore the importance of a comprehensive evaluation, including clinical, imaging, and histological assessments, to achieve an accurate diagnosis and appropriate management for patients with lymphangiomas.

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