e-ISSN: 0975-9506, p-ISSN: 2961-6093

Available online on www.ijpqa.com doi: 10.25258/ijpqa.16.6.32

International Journal of Pharmaceutical Quality Assurance 2025; 16(6); 174-182

Case Report

Kikuchi Cervical Lymhpadenitis – A Case Report

Syama V.[1], Sanal Mohan S.[2], Praseeda I.[3], Chandni Thomas[4]

[1]Postgraduate, Department of ENT, Travancore Medical College, Kollam, Kerala, India.
[2]Professor, Department of ENT, Travancore Medical College, Kollam, Kerala, India.
[3]Professor, Department of Pathology, Travancore Medical College, Kollam, Kerala, India.
[4]Senior Resident, Department of Pathology, Travancore Medical College, Kollam, Kerala, India.

Received: 07-05-2025 / Revised: 26-05-2025 / Accepted: 13-06-2025
Corresponding Author: Dr. Syama V.
Conflict of interest: Nil

Abstract:

Background: Kikuchi-Fujimoto Disease (KFD), also known as Kikuchi Cervical Lymphadenitis, is a rare, benign, self-limiting condition that predominantly affects young adults, often mimicking more serious disorders such as lymphoma or tuberculosis.

Case Presentation: We report a case of a 35-year-old female who presented with a painful, progressively enlarging neck swelling and intermittent low-grade fever. Clinical examination and imaging revealed multiple enlarged right cervical lymph nodes with necrotic features. Despite empirical antibiotic therapy, symptoms persisted and leukopenia worsened. An excisional biopsy of the cervical lymph nodes was performed, and histopathological examination confirmed the diagnosis of Kikuchi-Fujimoto Disease. The patient showed significant postoperative improvement, with normalization of laboratory parameters and complete clinical recovery.

Conclusion: Due to its varied presentation and close resemblance to other infectious or neoplastic conditions, Kikuchi Cervical Lymphadenitis remains a diagnostic challenge. Histopathology remains the gold standard for diagnosis. Early recognition can prevent unnecessary treatments and ensure appropriate management.

Keywords: Kikuchi-Fujimoto Disease, Cervical Lymphadenopathy, Histiocytic Necrotizing Lymphadenitis, Lymph Node Biopsy, Self-Limiting Illness.

Introduction

Kikuchi-Fujimoto disease (KFD), also known as Kikuchi Cervical Lymphadenitis (KCL) or histiocytic necrotizing lymphadenitis is a rare yet self-limiting inflammatory condition that primarily affects young adults, particularly women, initially documented by Japanese pathologists Kikuchi and Fujimoto in Japan in 1972. [1,2]

The typical presentation is acute to subacute, characterized by painful, tender, mobile cervical lymphadenopathy associated with systemic symptoms, including fever, malaise, weight loss, arthralgias, and various skin manifestations.[3]

Although KFD is a benign condition, its clinical course can mimic more severe diseases, which can lead to diagnostic challenges. An excisional lymph node biopsy is imperative for confirming a definitive diagnosis, revealing a deficiency of neutrophils and eosinophils. Fine-needle aspiration is typically inadequate for confirming the diagnosis due to the limited tissue sample acquired.[4]

Kikuchi-Fujimoto disease typically follows a self-limiting course lasting several months, with a low recurrence rate of approximately 3% to 4%.[5]

Despite its relatively rare occurrence, Kikuchi Cervical Lymphadenitis has gained attention due to its variable presentation and its association with other systemic diseases, particularly autoimmune disorders. A heightened awareness and early diagnosis are essential for distinguishing it from other more common causes of lymphadenopathy and to avoid unnecessary interventions like chemotherapy or prolonged antibiotic use.[6]

In this report, we present a case of Kikuchi Cervical Lymphadenitis that was successfully diagnosed and surgically managed at our institute, emphasizing the clinical and histological features that can aid in the timely recognition of this condition.

Case Report

35-year-old female with no known comorbidities came to our outpatient department with complaints

of gradually progressive painful swelling over the right side of her neck, associated with intermittent low-grade fever for the past 7 days. On clinical examination of the neck, multiple mobile lymph nodes were palpable on the right side of the neck. Among them, the right level 3 lymph node measured 3x2 cm, was firm, mobile, and had a local rise in temperature along with tenderness (Fig 1).

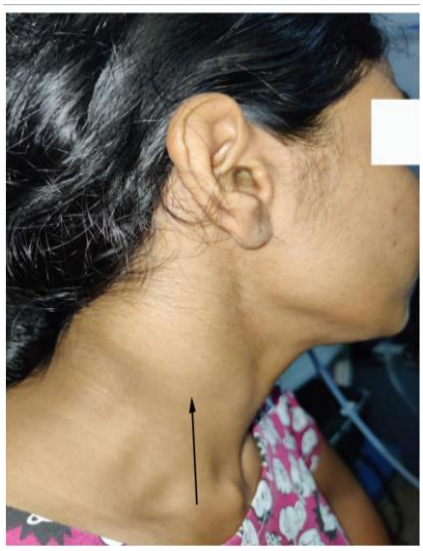

Figure 1: Firm swelling over the right side of neck

Diagnostic nasal endoscopy and video laryngoscopy were unremarkable. Ultrasonography of the neck revealed diffuse subcutaneous tissue oedema along with multiple enlarged oval shaped lymph nodes on the right side of neck at level 2, 3, 4 and 5 with absent fatty hilum. The largest lymph node measured 19x11mm, and few lymph nodes exhibited low level internal echoes and matting (Fig 2, 3). Ultrasonography of bilateral axillary region revealed reactive lymphnodes and ultrasonography of abdomen and pelvis showed a few small oval-shaped lymph nodes in the porta, with no evidence of hepatosplenomegaly or mass lesions. The chest x-ray was also within normal limits.

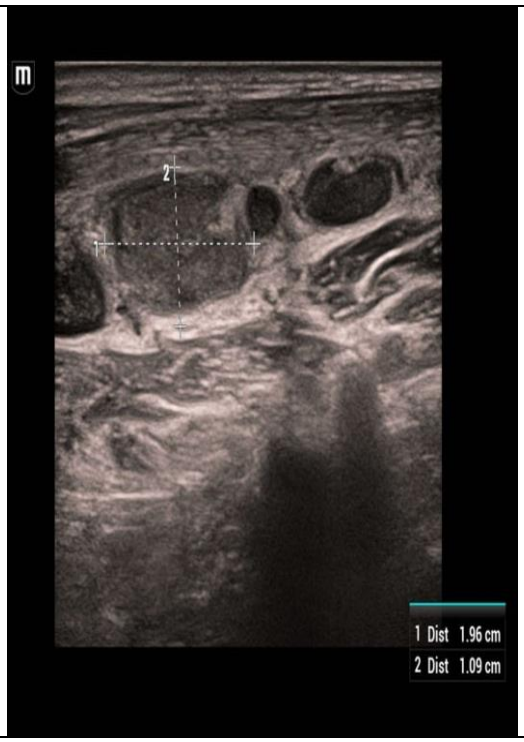

Figure 2

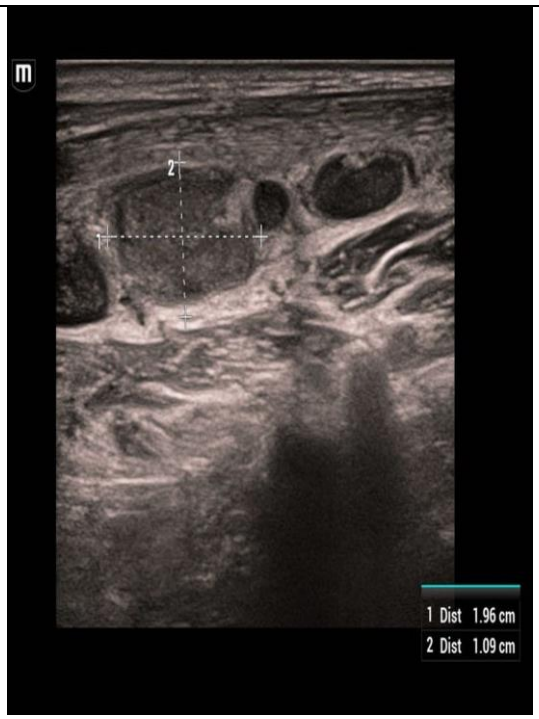

Figure 3

Further evaluation with contrast enhanced computed tomography revealed multiple prominent right cervical lymph nodes at levels 2, 3, 4 and 5, showing heterogeneous enhancement. The largest lymph node measured 10.5 x 8.2 mm (level 2), 9 x 7.5 mm (level 3), 10 x 7.5 mm (level 4) and 12 x 7.5 mm (level 5). A few of the right level 2b lymph nodes exhibited prominent hypoenhancing areas within, suggestive of necrotic regions, with the largest measuring 13x9.7mm, but no abscess formation was noted (Fig 4, 5, 6).

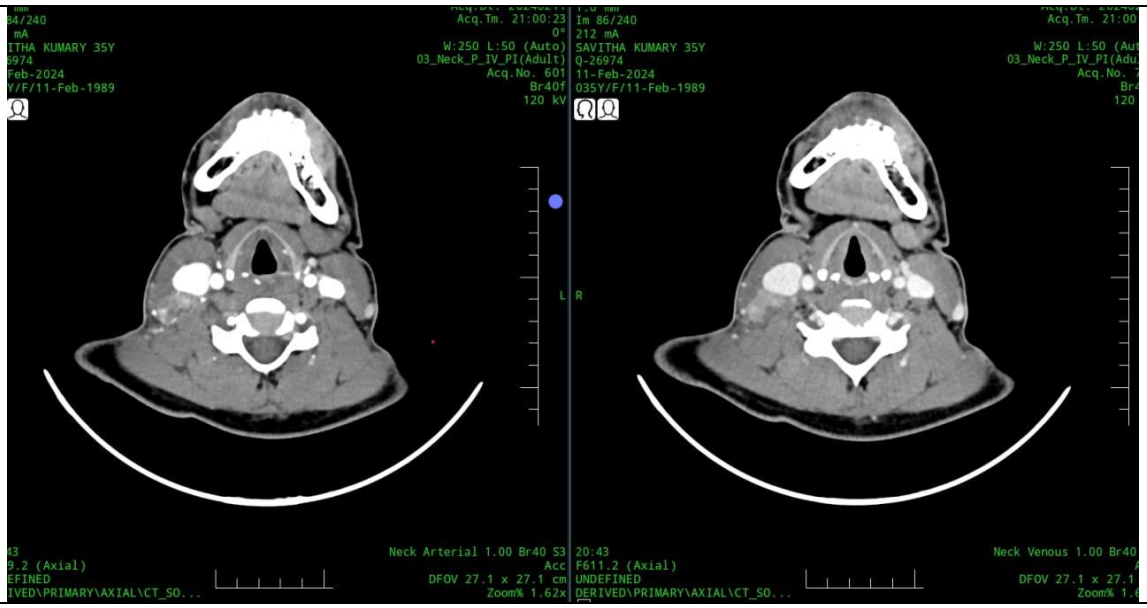

Figure 4

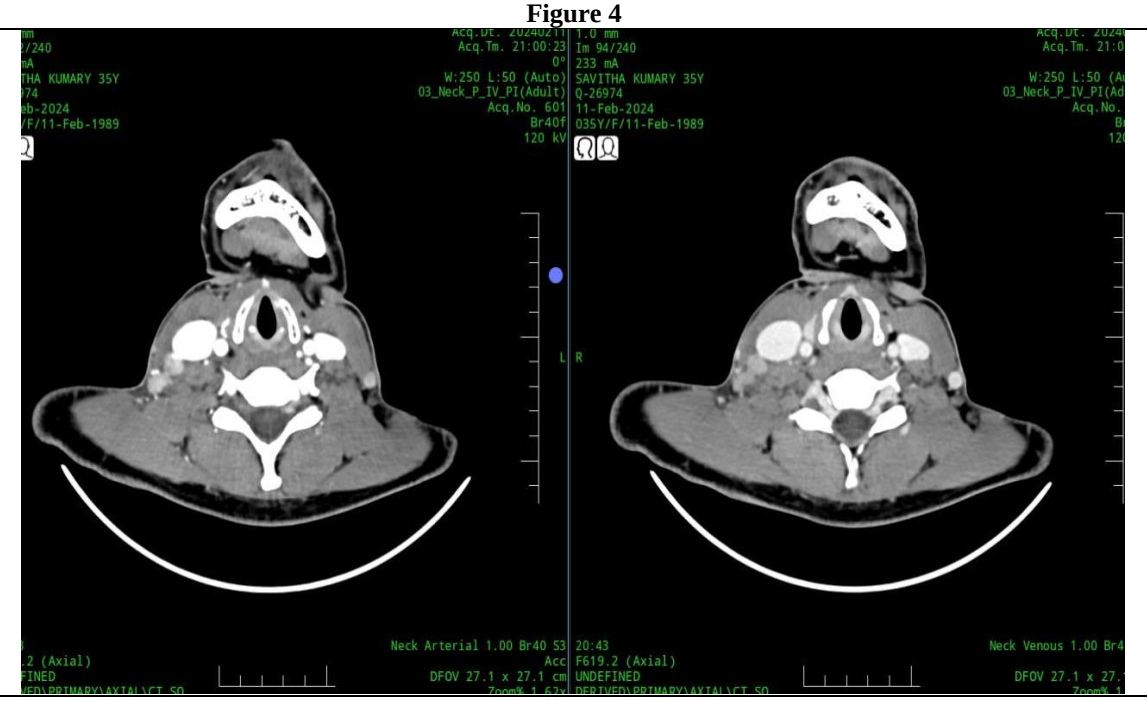

Figure 5

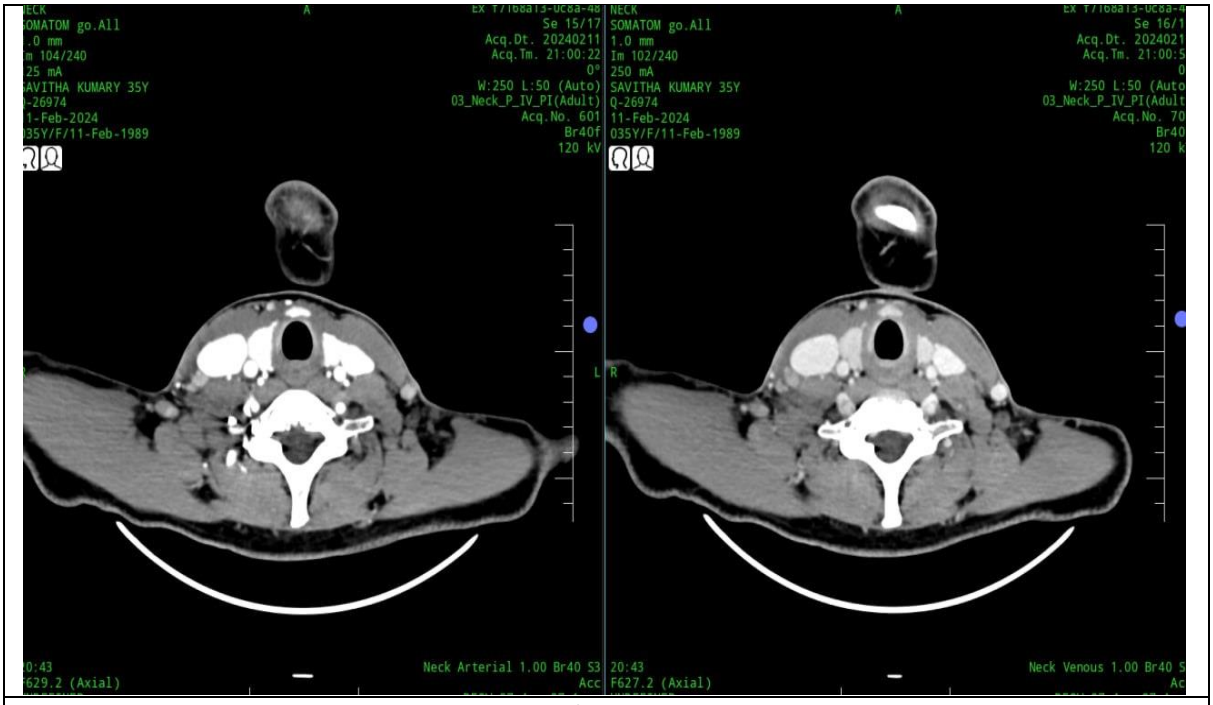

Figure 6

CT images showing multiple prominent cervical lymph nodes in axial cuts

Serial blood investigations were performed, showing progressive leukopenia. The peripheral Smear revealed mild relative lymphocytosis with a few reactive lymphocytes. Additional investigations, including Epstein-Barr virus IgM antibodies, HIV card test, direct Coombs test, antinuclear antibody by IFA and Mantoux test, were performed to rule out potential causes of fever and lymphadenopathy, all of which were negative.

The patient was receiving inpatient care with intravenous antibiotic support, but there was no improvement in the patient's condition, and progressive leukopenia was noted. As a result, the patient was prepared for excision and biopsy of right level 2 and 3 cervical lymph nodes under general anaesthesia.

After positioning the patient in the supine position with the neck extended and head turned to left, the site was marked with skin marker. After aseptic preparation and draping, a 4-5 cm horizontal skin crease incision was made over the right lateral aspect of the neck, approximately two fingerbreaths below the angle of mandible, extending from the anterior border of the right sternocleidomastoid muscle towards the midline (Fig 7).

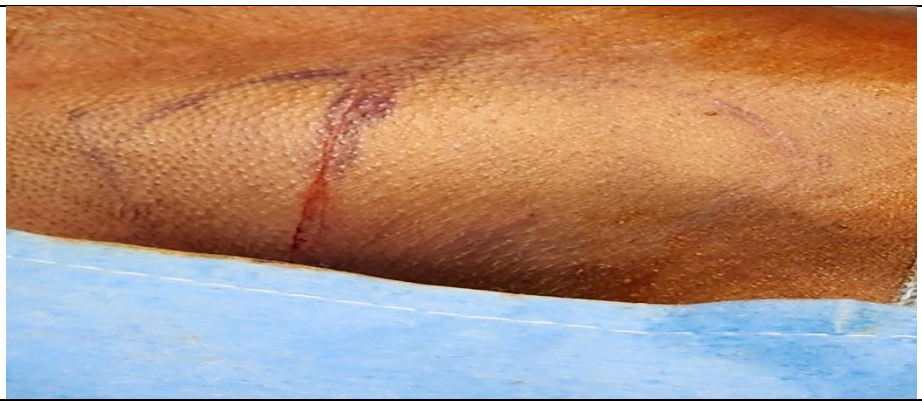

Figure 7

The incision was deepened through subcutaneous tissue and the platysma. Subplatysmal flaps were elevated both superiorly and inferiorly (Fig 8, 9). The right sternocleidomastoid muscle was identified and gently retracted laterally to expose the deep neck structures. A suspicious right Level II lymph node was sent for frozen section, which showed features suggestive of Kikuchi cervical lymphadenitis. Based on these findings, the remaining lymph nodes at Level IIa, IIb, and III

were excised in toto (Fig 10, 11, 12, 13) and sent for Histopathological examination, AFB staining, TB PCR, Gram staining, Fungal staining, Bacterial and fungal cultures. Meticulous dissection was carried out throughout the procedure to identify and preserve vital neurovascular structures including the spinal accessory nerve, internal jugular vein, and carotid artery (Fig 14).

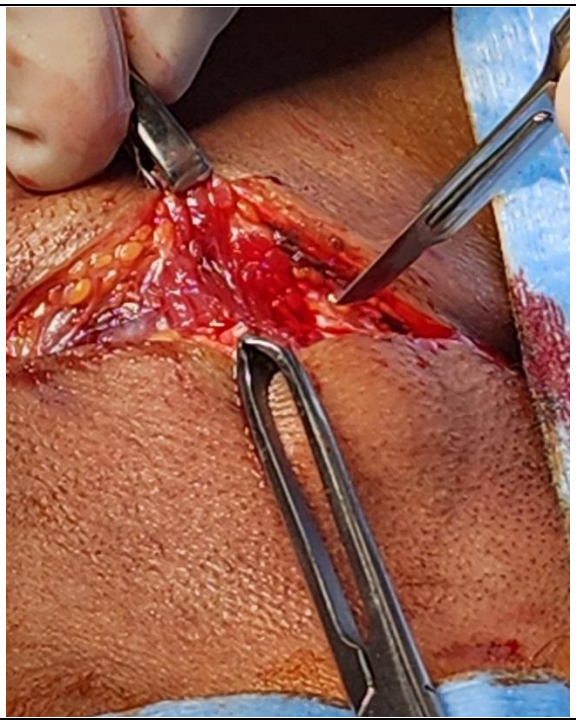

Figure 8

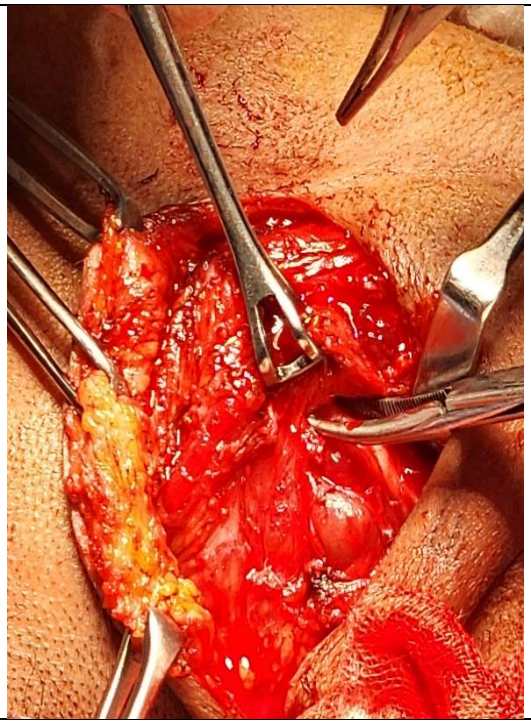

Figure 9

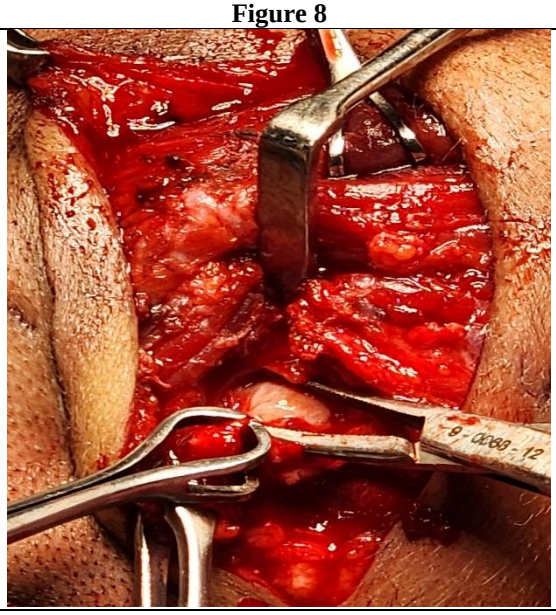

Figure 10

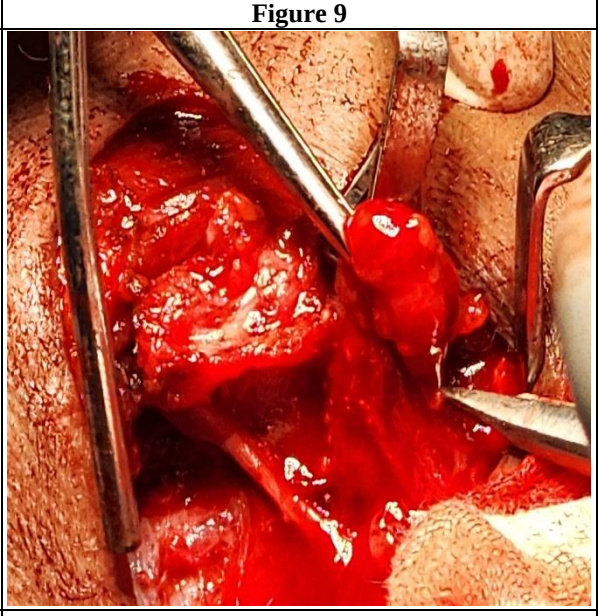

Figure 11

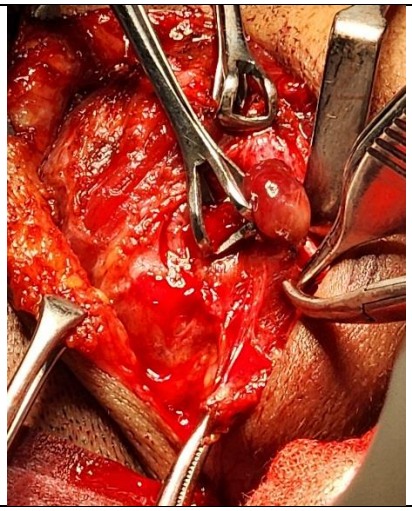

Figure 12

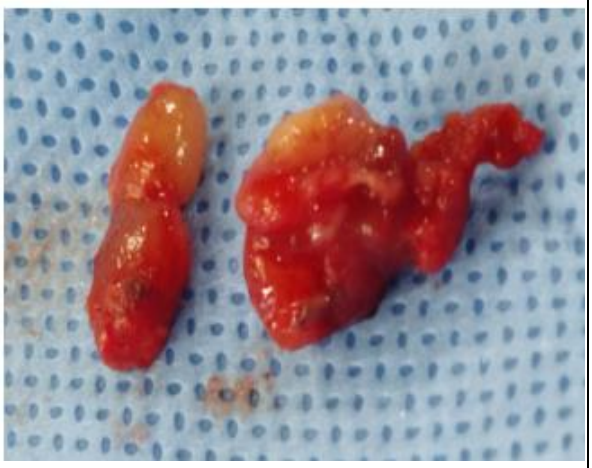

Figure 13

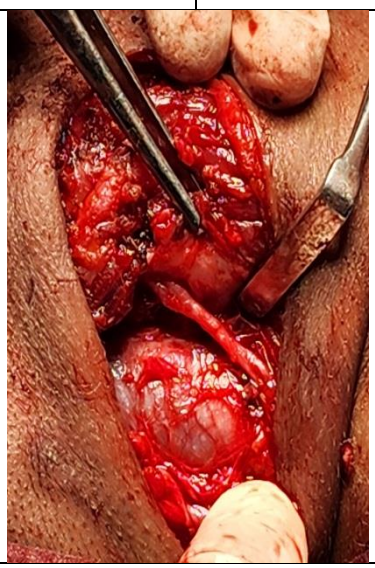

Figure 14

Hemostasis was secured. A closed suction drain was placed in the wound bed (Fig 15). The wound was closed in layers using absorbable sutures for deeper layers and appropriate technique for skin closure (Fig 16).

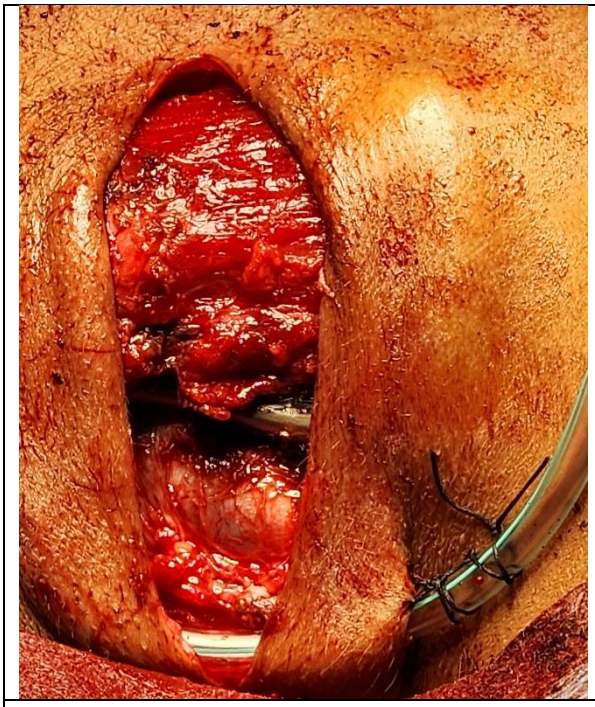

Figure 15

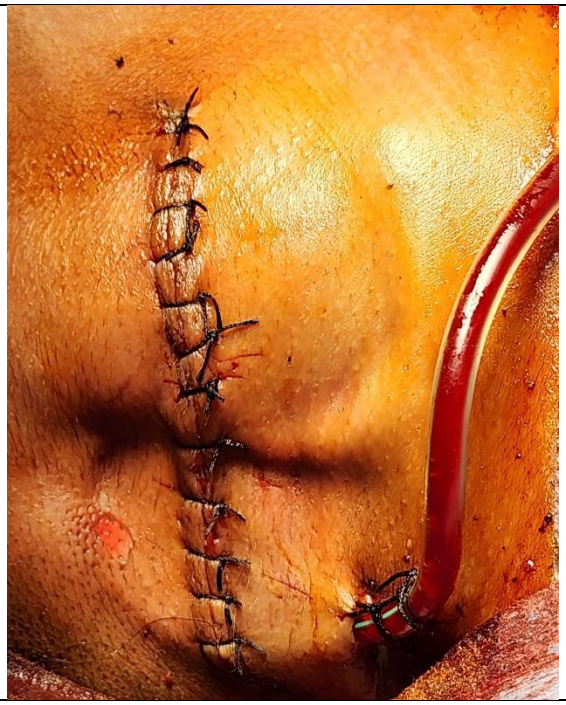

Figure 16

The patient was stable postoperatively and was shifted from ICU to the ward the next morning. The postoperative period remained uneventful. The patient showed progressive clinical and symptomatic improvement. Laboratory investigations on postoperative day 2 showed normalization of previously noted leucopenia and lymphocytosis. The drain was removed on postoperative day 2, and the patient was discharged on the same day in good condition.

Histopathology report revealed, lymph nodes with intact capsule and preserved architecture. Few fragments showed lymphoid tissue with extensive pale areas composed of amorphous necrotic debris, abundant karyorrhectic debris, and scattered lymphoid cells - Features consistent with necrotising lymphadenitis, favoring Kikuchi's disease (Fig 16, 17, 18, 19).

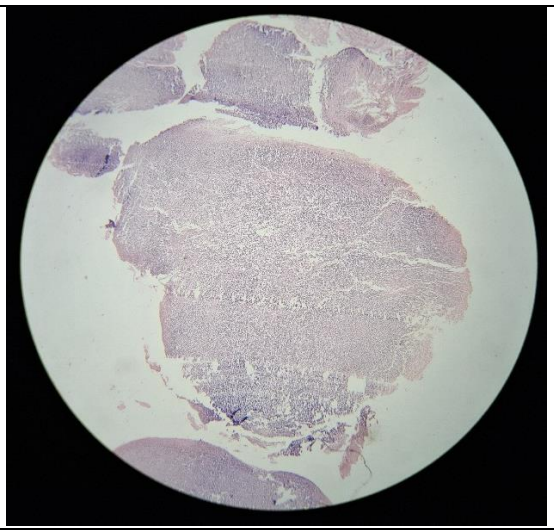

Figure 17

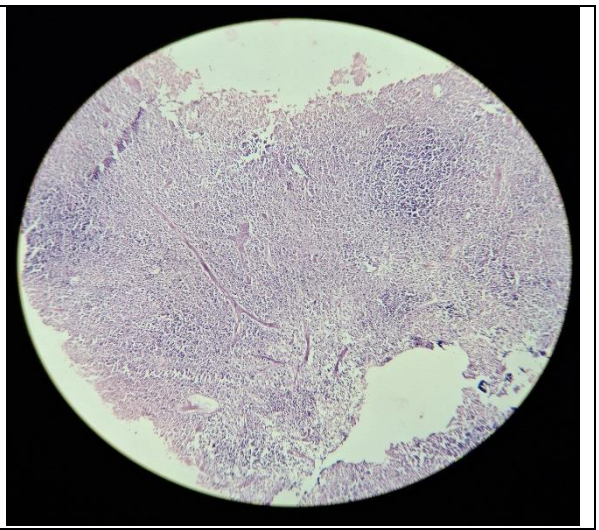

Figure 18

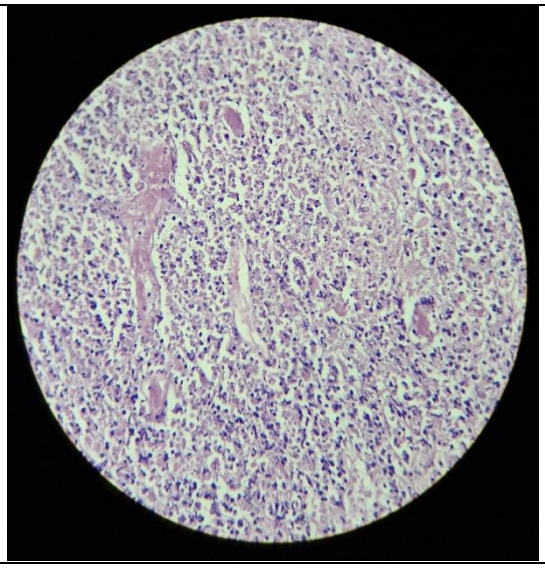

Figure 19

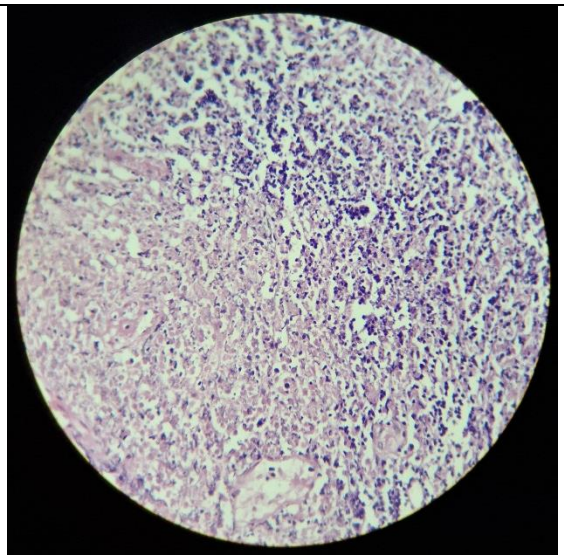

Figure 20

Discussion

Kikuchi-Fujimoto Disease (KFD), or Kikuchi Cervical Lymphadenitis, is a rare, often under-recognized cause of cervical lymphadenopathy. Its etiology remains uncertain, with both infectious and autoimmune mechanisms proposed. Although many viruses (e.g., EBV, HSV, CMV, HHV, parvovirus B19, HBV) and bacteria (e.g., Brucella, Bartonella henselae, Toxoplasma gondii) have been implicated, no definitive causative agent has been established.[7]

The autoimmune hypothesis is supported by associations with HLA class II alleles (especially HLA-DPB1) and diseases like SLE, Sjögren's syndrome, and rheumatoid arthritis.

KFD primarily affects young adults under 30, with recent studies suggesting an equal gender distribution. The pathogenesis is thought to involve T-cell-mediated apoptosis and cytokine release triggered by infection or autoimmune predisposition.[8]

Diagnosis is confirmed by excisional lymph node biopsy. Histologically, three stages are recognized:

- Proliferative: follicular hyperplasia with histiocytes and lymphocytes, absence of neutrophils/eosinophils.
- Necrotizing: karyorrhexis and necrosis, preserved architecture.
- Xanthomatous: foamy histiocytes, resolving necrosis.

Immunohistochemistry shows positive markers for myeloperoxidase, CD68, CD163, CD4, CD8 T cells, and CD123+ plasmacytoid dendritic cells, with absence of CD20+ B cells.[9]

There are no pathognomonic lab findings, though some patients may have elevated inflammatory markers (CRP, ESR), aminotransferases, LDH, and leukopenia. An autoimmune panel is essential, especially to rule out SLE, as histological overlap can occur. Imaging (ultrasound or CT) may support diagnosis by showing enlarged nodes with homogenous contrast or necrotic areas. [10,11]

Management is largely supportive. Most cases resolve spontaneously within 1–6 months. NSAIDs and antipyretics are typically sufficient; corticosteroids or immunosuppressives like hydroxychloroquine may be used for severe or recurrent cases. Relapse is uncommon in adults (3-4%) but higher in children (up to 39%).[12]

Due to associations with autoimmune disorders, long-term follow-up is advised. SLE may develop months or years later in a small percentage of patients, necessitating rheumatology surveillance. Skin biopsy may be helpful when vasculitis is suspected. [13,14]

Because of its rarity, KFD is frequently misdiagnosed-up to 40% of cases-often as lymphoma or bacterial lymphadenitis, leading to inappropriate antibiotic use. Thus, clinician awareness is essential.

Optimal management requires an interdisciplinary approach involving pathology, infectious disease, rheumatology, and internal medicine to ensure accurate diagnosis and follow-up.

Conclusion

Kikuchi Cervical Lymphadenitis is a rare cause of cervical lymphadenopathy, often presenting with fever, lymph node enlargement, and systemic symptoms. While its etiology remains unclear, the condition is most commonly seen in young women and can mimic other infectious or neoplastic processes, making early diagnosis challenging. Histopathological examination remains the gold

standard for diagnosis, and although Kikuchi disease is generally self-limited, management focuses on symptomatic relief. Given the absence of definitive treatment, awareness of this condition is crucial to prevent unnecessary interventions and to reduce diagnostic delays. Continued research into its pathogenesis and clinical management will help to refine diagnostic criteria and therapeutic strategies, ultimately improving patient outcomes.

Further research into its pathogenesis and association with autoimmune diseases is warranted to better understand the disease and improve diagnostic strategies.

References

1. Gurung S, Pariyar RS, Karki S, et al. Kikuchi-Fujimoto disease in a 20-year-old female: a case report. Ann Med Surg (Lond) 2023;85(5):1894-6.
2. Kellner D, Temelkovska T, Greeley A, et al. Kikuchi-Fujimoto Disease: a case report of fever and lymphadenopathy in a young white man. Fed Pract 2023;40(1):22-7.
3. Harrison J, Sukumaran S, Vijayan V. Systemic lupus erythematosus lymphadenopathy presenting as Kikuchi-Fujimoto disease in an adolescent. Cureus 2023;15(2):e35304.
4. Choi S, Choi HS, Ryu YJ, et al. Characterization of Kikuchi-Fujimoto disease in children and risk factors associated with its course. J Pediatr 2023;260:113515.
5. Fadul A, Subahi EA, Ali EA, et al. Kikuchi-Fujimoto Disease: A Rare Cause of Pyrexia of Unknown Origin and Cervical Lymphadenopathy. Cureus 2022;14(10):e30823.
6. Ahmed Z, Quadir H, Hakobyan K, et al. Kikuchi-Fujimoto disease: a rare cause of cervical lymphadenopathy. Cureus 2021;13(8):e17021.
7. Perry AM, Choi SM. Kikuchi-Fujimoto disease: a review. Arch Pathol Lab Med 2018;142(11):1341-6.
8. Joean O, Thiele T, Raap M, et al. Take a second look: it's Kikuchi's disease! A case report and review of literature. Clin Pract 2018;8(4):1095.
9. Xu S, Sun W, Liu J. Kikuchi-Fujimoto disease: a case report and the evaluation of diagnostic procedures. BMC Oral Health 2019;19(1):223.
10. Kwon SY, Kim TK, Kim YS, et al. CT findings in Kikuchi disease: analysis of 96 cases. AJNR Am J Neuroradiol 2004;25(6):1099-102.
11. Baenas DF, Diehl FA, Haye Salinas MJ, et al. Kikuchi-Fujimoto disease and systemic lupus erythematosus. Int Med Case Rep J 2016;9:163-7.
12. AlShieban S, Masuadi E, Alghamdi R, et al. Pathological features and clinical characteristics of Kikuchi-Fujimoto disease: a tertiary hospital experience in Riyadh, Saudi Arabia. Cureus 2023;15(1):e33683.
13. Hussain A, Gondal M, Yousuf H, et al. Baffled with fever and lymphadenopathy: neither infection nor malignancy, think Kikuchi disease. BMJ Case Rep 2021;14(1)
14. Al-Allaf AW, Yahia YM. Kikuchi-Fujimoto disease associated with Sjögren's syndrome: a case report. Eur J Case Rep Intern Med 2018;5(5):000856.