Kikuchi's Lymphadenitis In A Young Male

T Hansen, E Sotomayor, D Sarma

Citation

T Hansen, E Sotomayor, D Sarma. *Kikuchi's Lymphadenitis In A Young Male*. The Internet Journal of Head and Neck Surgery. 2006 Volume 1 Number 1.

Abstract

Kikuchi's disease is prevalent in Asian populations, but sporadic cases are seen in the Western hemisphere.

In this report we present a case seen in our daily practice and briefly review this entity with emphasis in its clinical and pathological features.

CASE REPORT

A previously healthy 37-year-old white man presented to the Creighton University Medical Center, with a 6-month history of chronic sinusitis, which had not improved with antibiotic therapy. In addition, he noticed an enlarged left cervical lymph node for a month. Physical examination was unremarkable except for a firm non-tender left supraclavicular node. The radiological and laboratory studies yielded normal results. An excisional biopsy of the node was performed.

The lymph node measured 2 cm in diameter and showed a homogenous tan cut surface.

On microscopic examination, the lymph node showed prominent paracortical expansion with a mottled appearance. Several irregular discrete eosinophilic areas in the expanded paracortex were identified (figure A). These eosinophilic areas were composed by a mixture of lymphocytes, immunoblasts, and histiocytes (figure B). A few foci of nuclear karyorrhectic debris were appreciated. However, no eosinophilic fibrinoid deposits, or neutrophilic infiltrate (figure C) were noted. Immunostains with CD68, CD20, CD3 and CD30 revealed that the eosinophilic areas where predominantly composed by CD68 positive histiocytes admixed with a minor population of CD3 positive T-lymphocytes, and a few CD20 positive B-lymphocytes some with morphology of CD30 positive immunoblasts.

Figure 1

Figure A shows low power view of expanded paracortex.

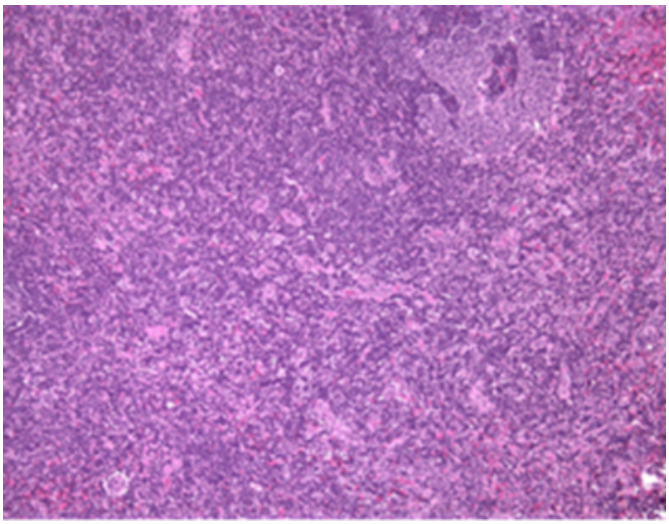


Figure 2

Figure B examines the cellular involvement of the eosinophilic areas composed of lymphocytes, immunoblasts, and histiocytes.

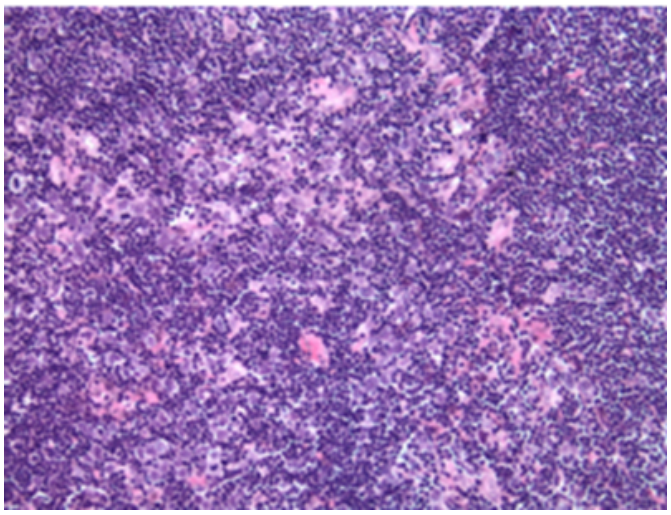
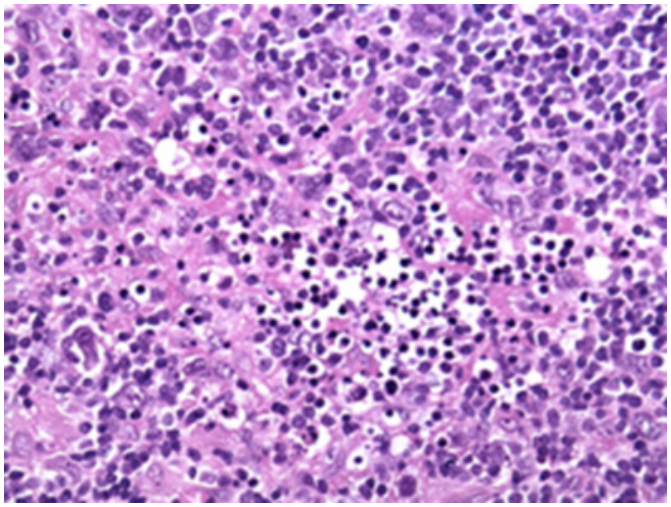


Figure 3

Figure C is a high power view showing an area of karyorrhexis/pyknosis with absence of eosinophilic and neutrophilic infiltrate.



Pathologic diagnosis: Kikuchi-Fujimoto lymphadenopathy.

DISCUSSION

This lymphadenitis was first independently described in 1972 by two authors, M. Kikuchi ([1]) and Y. Fujimoto ([2]). This entity is prevalent among Asian populations; however, sporadic cases have been seen in the Western hemisphere. Most affected patients are young adult women ([6], [7]). The lymph nodes of one side of the neck are involved in the majority of patients. Occasionally both sides of the neck and multiple other sites may be involved ([6], [7]). The patients may present with a painful enlarged node, fever, and cold-like symptoms. Fever is present in a third to one half of the patients, fifty percent of the patients may have leukopenia, less than 5% have leukocytosis and about 25% may have atypical lymphocytosis ([6]). Rare patients develop skin rashes. The disease is benign and self-limited with spontaneous resolution of the lymphadenopathy in a few weeks to months and only rarely recurs. Extranodal involvement is unusual but has been well documented

The clinical manifestations and the histological changes suggest a T-cell hyperimmune reaction triggered against an unidentified causative agent ([3], [4]). Several infectious agents including bacteria (Brucella, Yersinia), parasites (toxoplasma) and viruses (Epstein-Barr virus, human herpesvirus type 6 and type 8, and Parvovirus B19) have been suggested as etiologic agents ([5]). Human herpesvirus type 8 has been identified by molecular methods in some cases. To date no definitive etiologic agent causing this disease has been identified ([7]).

The involved lymph node has a partially preserved architecture with prominent paracortical hyperplasia and few residual reactive follicles. There are characteristic cortical or paracortical patchy eosinophilic areas, which are discrete or confluent, and variable in size and shape. Areas with irregular, round or serpiginous outlines can be seen. These pale eosinophilic areas contain numerous histiocytes (positive for CD68, KiM1P) admixed with variable amounts of T-lymphocytes (positive for CD3), immunoblasts, plasmacytoid monocytes, with foci of nuclear karyorrhexis and fibrinoid necrotic debris. However, epithelioid histiocytes, plasma cells, and eosinophils are infrequent, and neutrophils are rare or absent ([3], [6]). Some authors consider histiocytic proliferation rather that necrosis to be characteristic of this entity.

Three histological subtypes with characteristic features that possibly represent the different evolutionary stages of this entity have been described: a proliferative type showing a mixture of histiocytes and lymphoid cells with karyorrhectic or apoptotic debris but without coagulative necrosis; a necrotizing type where coagulative necrosis occurs; and a xanthomatous type where the foamy histiocytes predominate.

Kikuchi's disease resolves spontaneously and usually does not need any therapy. Systemic steroids have been used to speed up recovery. Skin rashes have been noted in a small group of patients with Kikuchi's disease and a possible relationship with systemic lupus erythematosus has been

suggested ([8]).

CORRESPONDENCE

Deba P Sarma,MD Department of Pathology Creighton University Medical Center Omaha, NE 68131 E-mail: debasarma@creighton.edu

References

1. Kikuchi M. Lymphadenitis showing focal reticulum cell hyperplasia nuclear debris and phagocytosis. Nippon Ketsueki Gakkai Zashi 1972; 35:379-80.
2. Fujimoto Y, Kozima Y, Yamaguchi K. Cervical subacute necrotizing lymphadenitis: a new clinicopathologic entity. Naika 1972; 20:920-7.
3. Dorfman RF, Berry GJ. Kikuchi's histiocytic necrotizing lymphadenitis: An analysis of 108 cases with emphasis on differential diagnosis. Semin Diagn Pathol 1988;5:329-45.
4. Tsang WYW, Chan JKC, Ng CS. Kikuchi's lymphadenitis. A morphologic analysis of 75 cases with special reference to unusual features. Am J Surg Pathol 1994; 18:219-231.
5. Hollingsworth HC, Peiper SC, Weiss LM et al. An investigation of the viral pathogenesis of Kikuchi-Fujimoto disease. Lack of evidence for Epstein-Barr virus or Human Herpes virus type 6 as the causative agents. Arch Pathol Lab Med 1994; 118: 134-140.
6. Kikuchi's disease in: Ferry, JA and Harris, NL, Editors. Atlas of Lymphoid Hyperplasia and Lymphoma. WB Saunders Company, Philadelphia 1997, pages 41-4.
7. Kikuchi-Fujimoto lymphadenopathy in: Iochim,HL and Ratech,H, Editors. Iochim's lymph node pathology. Third edition. Lippincott Williams & Wilkins. Philadelphia 2002, pages 219-222.
8. Vila LM, Mayor AM, Silvestrini IE. Therapeutic response and long-term follow-up in a systemic lupus erythematosus patient presenting with Kikuchi's disease. Lupus 2001, 10:126-8.

Author Information

Thomas P. Hansen, M.D.
Chief Resident, Department of Pathology, Creighton University Medical Center

Edgar A. Sotomayor, M.D.
Assistant Professor, Department of Pathology, Creighton University Medical Center

Deba P. Sarma, M.D.
Professor, Department of Pathology, Creighton University Medical Center