Diagnostic Challenges in 4 Cases of HIV Lymphadenopathy

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Background

- Lymphadenopathy can occur throughout the course of HIV infection due to HIV infection itself, opportunistic disease, malignancy, or immune reconstitution.
- Fine needle aspiration (FNA) of the accessible node is usually sufficient for diagnosing infectious etiologies more common in patients with lower CD4 cell counts but neoplastic etiologies may require excisional biopsy.
- Cytologic morphology, genotype and phenotype are critical in determining diagnosis.
- It is not unusual for the clinician's presumptive diagnosis to differ from the final diagnosis.

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Results	Patient 1	Patient 2	Patient 3	Patient 4
	75 y/o WM	45 y/o BM	43 y/o HM	58 y/o black male
Presenting Symptoms	Swollen left axillary node X 20 days	Enlarged inguinal lymph node X 11 months	Diffuse headaches	Left neck swelling X 3 months
Physical Exam	1.25" left axillary node	Tender left inguinal node	Scalp tenderness	Firm, non-tender2.5" left axillary node chain
HIV Diagnosis	5/2008	2/2010	6/2008	7/2010
Nadir CD4	241	11	261	277
Current CD4	706	592	364	1241
Current HIV Viral load(RNA copies)	<20	<40	Non-detectable	Non-detectable
History of Opportunistic Infections	Large B cell lymphoma	Cryptococcal meningitis	None	None
HAART	Dolutegravir/abacavir/lamivudine	Dolutegravir/abacavir/lamivudine	Emtricitabine/rilpivirine/tenofovir	Non-adherent
Diagnostic Studies				
White Blood Cell Count (3.5-10e3/ul)	5.8	6.8	7.2	8.8
Hemoglobin/Hematocrit/Plstelets	17.3/51/107	15/45.6/364	13.8/41/300	13/41/449
LDH(100008-208U/L)	180	125	150	146
PET/CT	FDG avid left axillary conglomerate lymphadenopathy	Pathologically enlarged left inguinal, external iliac, and pelvic sidewall lymph nodes	Brain-eosinophilic granulomas	Nonnecrotic, enlarged lleft jugulodigastric lymph node conglomerate
Lymph node biopsy	Inconclusive	B-cell lymphoma	Lymphoid neoplasm	Atypical lymphoid proliferation
Final diagnosis	Metastatic melanoma	Reactive lymphoid hyperplasia	Florrid lymphoid hyperplasia	Classical Hodgkin's Lymphoma

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Methods

- This was a retrospective review of 4 diagnostically challenging cases of lymphadenopathy in patients with HIV infection and CD4 cell counts greater than 350 who presented for routine outpatient care.
- Parameters included in the review are noted on Slide 3 to illustrate that length of HIV diagnosis, age and history of opportunistic infections. HIV viral suppression and normal laboratory work do not lead to a rapid diagnosis. Each complained of enlarged and/or tender inguinal, cervical or axillary lymph nodes ranging from 1.5 to 2.5 inches and were otherwise asymptomatic.
- HIV diagnosis ranged from 9-11 years; median age was 51.5 years. Nadir CD4 counts ranged from 11-277 and current CD4's from 364-1241. All had normal CBC's, platelets and lactic dehydrogenase levels.

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Discussion

These cases illustrate both benign and malignant etiologies. No infectious etiologies were identified. These patients need a detailed history, thorough physical exam and a complete diagnostic work-up that may include excisional biopsy and pertinent imaging including serial PET scans and focused sub-specialty consultations. Expert pathologic review can be required to establish the definitive diagnosis and presumptive diagnoses differed from the final diagnoses in all 4 of these patients. Asymptomatic lymphadenopathy cannot be ignored in patients with HIV.

References

1.Glushko T, He L, McNamee W, Babu AS, Simpson SA. HIV Lymphadenopathy: Differential Diagnosis and Important Imaging Features. AJR Am J Roentgenol. 2021 Feb;216(2):526-533. doi: 10.2214/AJR.19.22334. Epub 2020 Dec 16. PMID: 33325733.ces

2.Rodríguez-Vega F, Botero M, Cortés JA, Tobón Á. [Pathological findings in patients with HIV infection and lymphadenopathies]. Biomedica. 2017 Jan 24;37(1):79-85. Spanish. doi: 10.7705/biomedica.v37i1.3293. PMID: 28527251.

3. Kirwan DE, Ugarte-Gil C, Gilman RH, Hasan Rizvi SM, Cerrillo G, Cok J, Ticona E, Cabrera JL, Matos ED, Evans CA, Moore DAJ, Friedland JS, The Lymph Node Tuberculosis Lntb Working Group. Histological Examination in Obtaining a Diagnosis in Patients with Lymphadenopathy in Lima, Peru. Am J Trop Med Hyg. 2017 Oct;97(4):1271-1276. doi: 10.4269/ajtmh.16-0961. PMID: 29031289; PMCID: PMC5637594.