Hodgkin’s lymphoma masquerading as suppurative lymphadenitis

Sir,

Suppurative necrotizing changes associated with Hodgkin’s lymphoma (HL) are rare with very few cases reported in the literature. They can cause erroneous diagnosis of suppurative lymphadenitis. Thus, the cytopathologist and surgeon should always consider this entity in the differential diagnosis of a suppurative lymphadenitis like aspirate, and pursue repeat aspiration or an excisional biopsy if there is any index of clinical suspicion.

Case

A 60-year-old female presented with left supraclavicular swelling measuring 5 × 4 cm since 3 months and left axillary swelling measuring 3 × 3 cm since 10 days. History of fever and weight loss was present. Ultrasonography revealed multiple enlarged left supraclavicular and left axillary lymph nodes. The lymph nodes were hypoechoic and moderately vascular. Fine needle aspiration cytology (FNAC) was performed using 23-gauge needle, and slides were stained with May–Grunwald–Giemsa (MGG). Few slides were kept unstained. On microscopic examination, cytology smears from the left supraclavicular swelling showed extensive suppurative inflammation. Ziehl–Neelsen stain for acid fast bacilli was negative. Thus, the diagnosis of suppurative lymphadenitis was presumed. FNAC smears from the left axillary swelling, however, showed a completely different picture with presence of large cells with multilobulated nuclei, reticular chromatin, huge prominent nucleoli, and pale fragile cytoplasm (Reed Sternberg cells) in a background population of lymphocytes, histiocytes, and eosinophils [Figure 1a and b]. Smears from the left supraclavicular swelling were examined again, and after a very careful search, the characteristic Reed Sternberg cells were seen occasionally scattered in the polymorphonuclear infiltrate with very few eosinophils and lymphocytes [Figure 1c and d]. Thus, the cytologic diagnosis of HL was rendered for both the swellings. Immunocytochemistry was performed on the left axillary swelling using CD15 and CD30 which showed large atypical cells as CD15 positive [Figure 2a] and CD30 positive [Figure 2b]. Immunocytochemistry was also performed on the left supraclavicular swelling which showed large atypical cells as CD15 positive [Figure 2c] and CD30 positive [Figure 2d]. Thus, the cytologic diagnosis was confirmed.

Discussion

HL is a rare malignancy with an incidence of approximately 2.4 per 100000 per year. World Health Organization (WHO) classifies HL into 2 distinct entities – nodular lymphocyte predominant HL and classical HL (CHL). CHL accounts for 95% of all HL with bimodal age curve in resource-rich countries, showing a peak at 15–35 years of age and a second peak in late life. It is divided into four histological subtypes, i.e., lymphocyte-rich CHL, nodular sclerosis CHL, mixed cellularity CHL, and lymphocyte depleted CHL. In the developed world, nodular sclerosis CHL accounts for over two-third of all cases. CHL most often involves lymph nodes of cervical region followed by mediastinal, axillary, and paraaortic regions. HL may present with a wide variety of clinical symptoms. Pruritus and intermittent fever usually associated with night sweats are classic symptoms of HL. However, clinical presentation of suppurative disorder is rare and a very confusing scenario. There is scarce cytology literature emphasizing that CHL can present on cytology with such extensive suppuration so as to cause confusion.

Figure 1: (a-b) Cytological smears from left axillary swelling showing large multilobated Reed Sternberg cells in a background population of lymphocytes and eosinophils (a and b: MGG stain × 400), (c-d) Cytological smears from left supraclavicular swelling showing occasional scattered Reed Sternberg cells (marked with arrow) in a suppurative infiltrate (c and d: MGG stain × 400)
with infectious suppurative lymphadenitis [2-5]. Florentine and Cohen [3] published a case report of a patient whose cytology smears showed marked acute inflammation in a background of necrosis that proved later to be a case of HL and the cytology identified neoplastic Hodgkin and Reed Sternberg cells in the purulent exudate after retrospective review. The suppurative changes are mostly observed in nodular sclerosis CHL. [2] This presentation adds another diagnostic challenge to the diagnosis of nodular sclerosis CHL because of the paucicellularity of the specimen obtained by FNAC. [2,3]

Our case also showed presence of extensive suppuration in the left supraclavicular lymph node, thus misdiagnosing HL as suppurative lymphadenitis. It was only after retrospective examination and after examining smears from the left axillary lymph node that a correct diagnosis of HL could be made.

The differential diagnosis of such smears include infectious mononucleosis, tuberculosis, metastatic lymph node involvement, non-Hodgkin’s large cell anaplastic Ki-1-positive lymphomas, T cell rich B cell lymphomas, and peripheral T cell lymphomas of mixed type. Careful cytological examination and use of immunocytochemistry helps in arriving at a correct diagnosis.

Conclusion

The cytopathologist should always consider the possibility of HL in the presence of an abscessified, suppurative lymphadenitis like aspirate. A detailed search for the characteristic neoplastic cells of HL is mandatory in these cases.

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Conflicts of interest
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