Progressive Transformation of Germinal Centers (PTGC) is an uncommon condition, characterized by a reactive lymph node hyperplasia with enlarged follicles and expansion of mantle zone lymphocytes into adjacent germinal centers [1]. The disease occurs mostly in young oriental males and is characterized by persistent or recurrent asymptomatic lymphadenopathies, generally affecting cervical, inguinal and axillary nodes, with other nodes or extranodal sites being involved infrequently [2,3].

In the HIV-infected population, lymphadenopathy is common, and may be caused by neoplasms, opportunistic infections, and many other conditions, but PTGC has been infrequently reported [4]. We describe a patient with longstanding HIV-infection who presented with persistent impressive lymphadenopathies due to PTGC.

Case Presentation

A 38-year-old white male presented with enlarged lymph nodes at both sides of his neck, of two months duration. His past medical record included remote intravenous drug abuse, alcohol abuse, smoking habit, genotype 4 hepatitis C, HIV infection diagnosed 18 years earlier, Pneumocystis jirovecii pneumonia, and cerebral toxoplasmosis. The patient was on treatment with tenofovir, emtricitabine and efavirenz for his HIV infection. He was in good health, lymphadenopathies in the neck and axillae had diminished in size to 1 cm the largest of them, HIV RNA was undetectable (limit of detection 20 copies/ml), and CD4 lymphocyte count was 794 cells per µl.

Discussion

PTGC is now considered an IgG4-related disease, along with multicentric Castleman disease-like, follicular hyperplasia, interfollicular expansion, and nodal inflammatory pseudotumor-like. All five conditions are characterized by an IgG4 plasma cell infiltrate of lymph nodes or other tissues [5,6].

Blood analyses in PTGC may show increased IgG4 level, as well as other nonspecific alterations. Fluor-18-deoxyglucose-positron emission tomography scan generally displays increased uptake in affected tissues [1], while other image studies show nonspecific changes. A biopsy is needed to establish the diagnosis.

There is a significant association between PTGC and lymphoma.
especially with nodular lymphocytic predominant Hodgkin lymphoma, although evidence supporting a common pathogenesis is lacking [1]. Both conditions can present in a similar way, and must be differentiated on the basis of histologic, immunologic, and in situ hybridization analysis. An association of PTGC with autoimmune diseases, such as systemic lupus erythematosus, is also occasionally seen [1].

PTGC management is expectant in most cases, with close follow-up and additional investigations warranted should symptoms or new lymphadenopathy develops. Rituximab may have a role to prevent the development of relapsing Hodgkin’s lymphoma in patients with PTGC.

Only a few cases of PTGC in the HIV-infected population have been described so far. A detailed histological description of those cases is available, but unfortunately clinical data regarding status of HIV infection is not reported [4]. We speculate that inadequate control of HIV infection along with a relatively preserved immune function could have a role in the pathogenesis of PTGC in our patient.

We considered other conditions in the differential diagnosis of our case, including infectious diseases such as tuberculosis [7], inflammatory or idiopathic conditions such as sarcoïdosis [8], or Castleman’s disease [9]. And most of all we considered the possibility of lymphoma [10]. Histologic findings and clinical evolution over time allowed us to rule out all those conditions, and establish the diagnosis of PTGC.

Our case is remarkable for the impressive size of lymphadenopathies, due to a benign condition, such as PTGC, in an HIV-infected patient.

References