Differential diagnosis of Castleman's disease

Е.К. Egorova, A.L. Melikyan, I.N. Subortseva, E.A. Gilyazitdinova, E.I., Pustovaya, M.N. Sinitsyna,
A.M. Kovrigina, H.L. Julhakyan
National Research Center for hematology, Moscow, Russian Federation

Abstract

Castleman's Disease (CD) is the rare lymphoproliferative disease masking a number of hematologic, oncological and autoimmune diseases. Take care with fonts.

Discussion

Inspection of patients with suspected diagnosis of CD according to the recommendations of the international working group has shown that the frequency of occurrence of the diseases which are followed by Castleman-like similar changes in lymph nodes varies from 36,4 to 80% and depends on prevalence of process. The range of the diseases demanding an exception includes HL and NHL, connective tissue disease, other neoplastic processes and reactive condition.

Fig. 1. The distribution of the patients sent to National Research Center for hematology from 2016 to 2017 depending on the final diagnosis.

- CD
- NHL
- Tumor
- Primary amyloidosis
- HL
- Myeloma
- Connecting tissue diseases
- Reactive lymphadenopathy

Objective

Aim was determine the frequency of occurrence of the diseases which are followed by Castleman-like similar changes in lymph nodes

Materials & Methods

We analyzed medical records of the 48 patients with preliminary diagnosis CD who directed in outpatient department of National Research Center for hematology from 2016 to 2017. All patients were examined according to the recommendations of the international working group on the study of CD (tabl. 1). Morphological study of lymph node tissue biopsies included the assessment of regressed or hyperplastic germinal centers, follicular dendritic cell prominence, vascularization and polytypic plasmacytosis in the interfollicular spaces by the point system from 0 to 3 grades.

Table 1. The protocol of differential diagnosis of Castleman's disease.

Criterion CD	Laboratory and instrumental studies
1.The morphological picture of Castleman's disease in the biopsy of lymph node/neoplasms	- histological examination of biopsy of lymph node/neoplasms, - immunohistochemical examination of biopsy material of the lymph node/neoplasms, include LANA-1 HHV-8, - molecular and cytogenetic studies of lymph node/neoplasm biopsy.
2. The absence of diseases associated Castleman-like features in biopsy of lymph node/neoplasms	- cell blood count, biochemical blood test (LDG, AF, GGT), coagulation test (activated partial thromboplastin time), HBsAg, anti-HBcor, anti-Hbs, anti-HCV, anti-HIV antibodies, syphilis, urinalysis, chest x-ray, ECG and ultrasound of the abdominal cavity, - immunochemical study of serum and concentrated urine proteins, - bone marrow biopsy (required for MCD), - antinuclear antibodies, ANF, antibodies to double DNA, C3, C4, anti-Ro/ SS, anti-La / SS, lupus anticoagulant, antibodies to TPO, antibodies to cardiolipin 1, beta2-glycoprotein (IgM and IgG), IgG, IgG4, IgE, - gastroscopy, colonoscopy, CT or MRI of the chest, abdomen, retroperitoneal space and pelvis, mammography, consultation of a gynecologist, urologist.

Table 2. Incidence of Castleman's disease among patients referred to National Research Center for hematology in 2016-17.

	Local lymphadenopathy	Generalized lymphadenopathy
Total number of patients with preliminary diagnosis CD	33	15
The diagnosis of CD confirmed	21	3

Summary

Morphological picture in 24 lymph node tissue biopsies (50%) corresponded to the first large criterion of diagnosis of CD. In these cases, comparison of clinical and laboratory data allowed to confirm the diagnosis of CD.

The greatest divergence was in cases with a generalized lymphadenopathy (tabl.2). From 15 patients with the preliminary diagnosis multicentric CD the diagnosis has been confirmed in 20% (three patients). Diagnosis CD was changed to the Hodgkin's lymphoma (HL) in three cases, to nonHodgkin's lymphoma (NHL) in three cases, to the connective tissue disease in two cases, to primary amyloidosis at one patient, to tumor not of the lymphoid nature in two cases and to multiple myeloma in one patient. In cases with local specific involvement the diagnosis of CD has been confirmed at 21 of 33 patients (63,6%). The range of the revealed diseases included: a reactive lymphadenopathy in 6 cases, a tumor not of the lymphoid nature in two cases, HL at the one patient and NHL at the three patients (fig.1).

References

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