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Commentary

Clinical Features of Plasma-Cell on Castleman Disease and Adverse Effects of Siltuximab Treatment

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DESCRIPTION

The term "Castleman Disease" (CD) refers to a collection of at least four disorders that, while having a variety of pathophysiology, presentations, therapies, and prognoses, all have a common distinctive histological trait. Benjamin Castleman first identified CD as a localized enlargement of the extra medullary lymph nodes in the 1950s, which was characterized by an increase in the number of lymphoid follicles with development and maturation of the germinal core and prominent capillary proliferation, including follicular and interfollicular endothelial hyperplasia. The Plasma Cell (PC), the hyalinized, and the "intermediate" (or mixed) histopathological variations were all characterized by Flendrig in 1969. Additional descriptions have revealed information on clinicopathologic relationships. By the middle of the 1980s, CD was split into Multicentric CD (MCD), which involved multiple lymph node sites, and Unicentric CD (UCD), which involved a single swollen lymph node or cluster of lymph nodes. Researchers discovered a link between HIV and MCD. In the 1980s and 1990s, it was also noted that MCD and the PC neoplasm Polyneuropathy, Organomegaly, Endocrinopathy, Monoclonal plasma cell disorder, Skin changes (POEMS) syndrome, also known as Takatsuki or Crow-Fukase syndrome. Later, it was hypothesized that the monoclonal PCs causing POEMS. In the 1990s, Human Herpes Virus-8 (HHV8) was discovered to be the etiological factor in all HIV+ and some HIV MCD cases. According to Takai identified a severe form of HHV8 or idiopathic MCD (iMCD), which is known as Thrombocytopenia, Ascites, Reticulin Fibrosis, Renal Dysfunction, and Organomegaly (TAFRO) syndrome. Patients with this condition had a homogenous constellation of abnormal laboratory tests and clinical features. The Castleman Disease Collaborative Network (CDCN) recently proposed a classification system that maintains the distinction between UCD and MCD nomenclature while further dividing MCD by etiological pilot (HHV8-associated MCD [HHV8-MCD]; POEMS-associated MCD [POEMS-MCD]; iMCD) and within iMCD by phenotype, iMCD-TAFRO, and iMCD-not otherwise specified) (iMCD-NOS).

Clinical features of plasma-cell castleman disease

9% to 24% of localized CD is of the plasma cell type, which is more frequently multicentric than unicentric. The hyaline-vascular type and the localized form both occur in the same patient population. However, the unicentric plasma cell variant is more frequently linked to systemic symptoms and abnormal laboratory results. Fever, night sweats, malaise, splenomegaly, hypergammaglobulinemias, and cytopenias such anemia and thrombocytopenia are among the most often reported clinical symptoms. Most cases with multicentric plasma cell CD are likely to be represented by the localized form of the disease, which is likely the least well recognized. Similar to multicentric CD, cases of unicentric plasma cell CD appear to be accompanied by an increase in serum Interleukin (IL)-6. Apart from multicentric CD, which requires systemic therapy, localized plasma cell CD has been reported to be curable by surgical excision. The clinical condition POEMS, which includes polyneuropathy, organomegaly, endocrinopathy, M protein, and skin abnormalities, has also been linked to both the unicentric and multicentric types of plasma cell CD.

Adverse effects of siltuximab treatment

The prolonged use of siltuximab showed a positive safety profile and was well tolerated. Upper respiratory tract infections with mild to moderate symptoms were the most frequent side effect of siltuximab therapy, followed by a grade 2 maculopapular rash, peripheral neuropathy, neutropenia, diarrhea, and weight gain. Since the initial Coronavirus Disease-19 (COVID-19) outbreak in Korea in January 2020, siltuximab treatment for two patients with upper respiratory infections confirmed Polymerase Chain Reaction (PCR) Positive for Severe Acute Respiratory syndrome virus type 2 (SARS-CoV-2). They experienced just minor symptoms, though, and no serious side effects. After the initial presentation of cough and yellow sputum, one patient had pulmonary tuberculosis.

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