

Healthcare Use by Patients with Multicentric Castleman Disease

November 17, 2014

L Pattacini

Castleman disease (CD) is an extremely rare lymphoproliferative disease characterized by increased expression of interleukin 6 (IL-6) and consequent over-proliferation of lymphoid cells. The disease can present in two clinical manifestations, a localized form and a multicentric form (MCD). Furthermore, three histological CD variants have been identified: hyaline vascular, plasmacytic and a mixed type. A reason for interest in MCD by infectious disease specialists is its high prevalence in HIV-seropositive subjects attributable to infection with human herpes virus-8 (HHV-8).

Patients with MCD show manifestations of the disease as multiple enlarged lymph nodes and other symptoms such as fever, fatigue, night sweats and anemia. Because of the complexity of the symptoms, a variety of treatments are administered to patients, which usually see the care providers several times a year during the course of the disease. Rituximab, a monoclonal antibody targeting the molecule CD20, expressed on B cells, is the most commonly used treatment, followed by corticosteroids and the IL-6 receptor inhibitor tocilizumab. Prospective randomized trials will be needed to establish the most effective treatment.

"One question that arises", says Dr. Corey Casper from the Vaccine and Infectious Disease Division (VIDD), "is 'what is the burden of the disease in the general population', or 'how many people have it and how severe is the disease of those afflicted'?" To answer this question, Dr. Casper sought to review patterns of referrals to two large referral centers, the Mayo Clinic in Rochester, MN and Fred Hutch, and characterize the encounters with the medical care system. The results of this study have been published in *British Journal of Haematology*.

"In a nutshell", explains Dr. Casper, "we estimated the disease to be incredibly rare, with a 10-year prevalence of 2.4 cases per million Americans (or nearly 900 cases across the country over a period of 10 years). Overall, survival was excellent, with 92% of patients alive 2 years after diagnosis. We found that patients with MCD had frequent encounters with the health care system. HIV-negative patients were hospitalized an average of 5 times in the year of their diagnosis and spent more than \$20,000 in healthcare costs. We had a small number of HIV-positive patients, but they actually had a worse survival and expectedly higher healthcare costs. For future studies, we will look at how HIV

stage, immunosuppression and treatment affect the clinical manifestation of the disease, and healthcare utilization."

Of note, Dr. Casper published an important case series in 2004, which showed that in HIV-positive patients, the disease, which was previously treated with chemotherapy, could be effectively treated by targeting HHV-8 with an antiviral medication (ganciclovir). Dr. Casper developed one of the largest clinics for MCD in the US, and contributed to the development of a new therapy for the treatment of HIV-negative subjects affected by MCD, which was recently approved by the FDA.

Given the rarity and the complexity of the disease, a defined standard of diagnosis and care is still missing; this study provides an overall description of the natural history of the disease and the patterns of healthcare required. This report offers some tools for a better recognition and management of MCD, needed to improve the quality of life of patients affected by a disease that has not been completely defined yet.

[Casper C, Teltsch DY, Robinson D, Desrosiers M, Rotella P, Dispenzieri A, Qi M, Habermann T, Reynolds MW.](#) 2014. Clinical characteristics and healthcare utilization of patients with multicentric Castleman disease. *BJH*. Epub ahead of print.

See also: [Van Ree F, Wong RS, Munshi N, Rossi J, Ke X, Fossa A, Simpson D, Capra M, Liu T, Hsieh RK, Goh YT, Zhu J, Cho S, Ren H, Cavet J, Bandekar R, Rothman M, Puchalski TA, Reddy M, van de Velde H Vermeleun J, Casper C.](#) 2014. Siltuximab for multicentric Castleman disease: a randomized, double-blind, placebo-controlled trial. *Lancet Oncol.* 15(9):966-74.



Image provided by Dr. Corey Casper.

Referral areas and disease burden around the Fred Hutch and the Mayo Clinic.