Bortezomib for the Treatment of Refractory Stiff Person Spectrum Disorder
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Objective:
To report the novel use of bortezomib in refractory stiff person spectrum disorder and discuss the efficacy, treatment protocol and side effects.

Background:
Stiff Person Syndrome is a disorder characterized by fluctuating muscle rigidity along with spontaneous and stimulus-induced painful spasms. Stiff Person Spectrum Disorder (SPSD) is a term used to describe patients with atypical features of SPS. Treatment can be divided into medications that enhance GABA-related activity and immunotherapy. Various immunotherapies have been tried in the past with little data from randomized control trials. Bortezomib is a proteasome inhibitor that is used in the treatment of multiple myeloma and was used recently in the treatment of refractory NMDA-R encephalitis. Bortezomib decreases both short-lived and long-lived plasma cells which leads to decreased production of circulating antibodies. Possible side effects include neutropenia, anemia, neuropathy, GI upset, LFT derangements, and hypotension.

Design/Methods:
Review of medical records and literature

Results:
We report a 58-year-old woman with SPSD with elevated anti-glutamic acid decarboxylase antibody titers in both serum and CSF. Over the course a decade-long disease, the patient suffered from significant disability with axial spasms, stimulus induced spasms and recurrent episodes of vertigo. She failed multiple immunotherapies including plasmapheresis, IVIG, mycophenolate mofetil and rituximab. Given the refractory nature, we chose to use bortezomib as an off-label therapy. Our patient received 5 cycles of subcutaneous bortezomib on days 1, 4, 8, and 11 per cycle followed by a 10-day treatment-free interval. CBC, BMP and LFTs were followed. She developed mild neutropenia after cycle 3 requiring 2-week delay of cycle 4. After treatment completion, she reported improvement with more ability to ambulate and less use of anti-spasmodics.

Conclusions:
Bortezomib seems to be safe in patients with stiff person spectrum disorder and is a promising therapeutic option for those refractory to other immunotherapies.