

Aprepitant for Severe Refractory Pruritus in a Patient with Relapsed Hodgkin's Lymphoma

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Aprepitant for Severe Refractory Pruritus in a Patient with Relapsed Hodgkin's Lymphoma

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We present the case of a 27-year-old male pediatric patient with relapsed Hodgkin's lymphoma (HL) who experienced severe, refractory pruritus as a paraneoplastic effect. Despite multiple lines of therapy, conventional treatments failed to alleviate his symptoms. A trial of aprepitant, an NK1 receptor antagonist traditionally used for nausea and vomiting control, initiated, resulting in a rapid and significant improvement in pruritus, quality of life, and overall well-being.

According to our knowledge, this is the second case of Hodgkin Lymphoma responded to aprepitant as treatment of refractory pruritus.

A 27-year old man diagnosed with multiple relapsed Hodgkin lymphoma, which failed multiple lines of therapy. He presented with severe generalized pruritus, which worsened over time and interfered with his

sleep and function. It improved slightly with cold showers but failed all conventional therapies, including antihistamines, steroids, lotions, and gabapentin.

Ten months after his last relapse, we initiated a trial of aprepitant at a dose of 80 mg once daily for three days, resulting in an immediate response with a significant improvement in his symptoms, sleep quality, reduced itching, and an overall enhancement in his mood and quality of life.

Of significance, the patient diagnosed earlier with HL at the age of 15 years, treated with chemotherapy, inducing a remission; followed by multiple relapses, treated with high dose chemotherapy and Auto bone marrow transplant, allogenic bone marrow transplantation, and courses of chemotherapy and checkpoint inhibitors. He had complained of itching at time of presentation and with subsequent relapses, successfully treated with disease control.

Paraneoplastic pruritus has a reported prevalence of 30% in patients with HL.[1] There is a scarcity of studies evaluating the efficacy of pharmacological interventions for HL associated pruritus, reflecting a pressing need for innovative treatment approaches. Conventional therapeutic modalities for chronic pruritus include corticosteroids, antihistamines, and systemic therapies like gabapentin, UV light therapy, and immunomodulatory treatments.[2–4] However, a subset of patients remains unresponsive to these conventional therapies, necessitating the exploration of alternative treatment avenues. Aprepitant, conventionally known for its efficacy in preventing chemotherapy-induced and postoperative nausea and vomiting, emerges as a promising alternative. Remarkably, the patient had significant reduction in pruritus following the initiation aprepitant therapy, with rapid improvement of his quality of life.

Aprepitant operates by antagonizing the Neurokinin-1 (NK1) receptor, a G-protein coupled receptor, thereby blocking the actions of its primary ligand, Substance P, a nociceptive neurotransmitter. Substance P is significantly involved in mediating various physiological processes such as pain, depression, nausea, vomiting, and notably, pruritus (itching). The NK1 receptors are distributed in both the central and peripheral nervous systems, which is where Substance P generally exerts its effects.[5]

Previous anecdotal data reveals the effectiveness of aprepitant in providing relief to patients unresponsive to other treatments including patients with Sézary syndrome, mycosis fungoides, T-cell lymphoblastic lymphoma and other malignancies.[4] In the presented case, the employment of aprepitant, off-label, mirrored these findings, showcasing a noteworthy improvement in the pruritus, which was solely attributable to the aprepitant therapy. This is the second report of such a use in a patient with HL. [1]

Our case highlights the potential of aprepitant as a novel and effective treatment option for paraneoplastic pruritus in pediatric patients with relapsed Hodgkin's lymphoma, particularly when conventional therapies fail to provide relief. We believe that further investigation and larger-scale studies warranted to explore the full scope of aprepitant's utility in managing pruritus in this population.

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