

Aprepitant-Related Anaphylactic Shock and Cardiac

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Editorial

The patient has been diagnosed with stage IV adenocarcinoma of the lung with adrenal gland, left internal iliac and pararectal lymph nodemetastases. Next generation sequencing was negative for actionblemutations, PDL 1 status 50%, Micro Satellite Instability (MSI-H) not detected. For bone metastases, she was started on IMPOWER 150, which included carboplatin+paclitaxel+bevacizumab+atezolizumab+atezolizumab and zoledronic acid. The patient was taking mirtazapine, omeprazole, ondansetron, and albuterol at the same time at home. The patient became hypotensive, developed a rash, and experienced a headache during the second cycle after receiving aprepitant and the initial minutes of the paclitaxel infusion. affect one's mental state. The quick response team was dispatched, and when she arrived, she went into cardiac arrest while being transferred to the hospital. For the next 48 hours, she needed to be resuscitated and intubated. She eventually recovered, was extubated, and was able to be treated. Disease stability has been achieved with pembrolizumab treatment for her lung cancer, which she had for a few months. Chemotherapy causes nausea and vomiting, which has a major impact on the patient's daily functioning, eating abilities, and general quality of life. We present a case of anaphylactic reaction after aprepitant infusion during the second cycle of chemotherapy for patients with uncontrolled diabetes. The potential of chemotherapy to generate emesis, commonly known as emetogenicity, is the most critical factor in N/V incidence. Chemotherapy agents are classified as having a high, moderate, or low risk of causing N/V in accordance with the guidelines. High-risk chemotherapy causes vomiting in 90% of patients who get it without premedication, while moderate-risk chemotherapy causes vomiting in 30% to 90% of patients. N/V has a relapsing time course, with symptoms appearing 1 to 2 hours after commencing the drugs. Approximately 24 hours long, then seizing and resurfacing 48-72 hours later. A feedback loop between the gastrointestinal tract and the Central Nervous System mediates N/V. One of these pathways includes substance P binding to NK1

receptors in the GI and central nervous system. Using an NK1 antagonist to block the NK1 receptor is a popular treatment.

To solubilize the fosaprepitant, this presentation contains the nonionic surfactant polysorbate 80. Polysorbate 80 is a biologically active compound found in a few IV formulations, including those containing docetaxel. The presence of polysorbate 80 in these agents' preparation may contribute to hypersensitivity systemic reactions and infusion-site adverse events during and after administration. Fosaprepitant is a chemotherapy-related N/V medication used in conjunction with dexamethasone and a 5-HT3 antagonist.

Another NK1 antagonist, rolapitant, has the longest half-life of any NK1 antagonist, but it was withdrawn from the market due to hypersensitivity reactions and anaphylaxis. In addition, several NK1 RAs have the potential for drug-drug interactions. Two reports of rolapitant causing severe infusion reactions have been published. We don't know the precise mechanism of anaphylaxis seen in the fosaprepitant patient, who raises the question: does antagonism of the NK receptor cause anaphylaxis through mechanisms other than increasing substance P? Nobel medications are being researched for the prevention and treatment of N/V caused by chemotherapy. HTX-019 is an example of a novel agent.

Cases of anaphylaxis following aprepitant infusion have not been reported in the literature; therefore, it is critical to demonstrate this link between a commonly used medication and a potentially fatal outcome. Although anaphylaxis due to aprepitant is a rare occurrence, this type of pathology should be evaluated by a multidisciplinary team for a better outcome. When it comes to anaphylactic reactions, it is critical to have a broad differential diagnosis.

Recognizing this type of presentation is critical for institutions to make the correct diagnosis and evaluate future pre-chemotherapy protocols and medication adjustments.

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