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Acute angioedema response to topical 5-fluorouracil therapy

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Abstract

This is a case report involving a patient who was treated with topical 5-FU cream and subsequently developed a severe case of angioedema. This case presents the possibility of anaphylaxis to topical 5-FU treatments and/or the interaction with angiotensin converting enzyme inhibitors. To our knowledge there has been no prior reported case of this reaction. We present this unusual case along with a review of the current literature on angioedema.

Case report

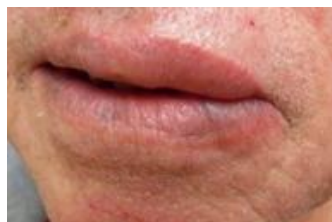


Figure 1



Figure 2

A 77-year-old man with a history of diffuse actinic keratosis presented to the outpatient clinic with progressive facial and peripheral edema. He complained of severe pruritis in his distal upper extremities, swelling of hands and lips, and dysphonia. The patient had been examined in the office 12 days prior and was given topical 5-Fluorouracil 0.5 percent cream for treatment of actinic keratoses on his chest. The patient stated that he initially applied the cream to his chest in prescribed amounts, but later began applying the medication several times daily. Approximately 9 days after beginning use of the cream the patient began to experience pruritis and swelling in both hands. Later, the patient experienced a near syncopal episode with and was seen in the emergency department where he was treated with benedryl, triamcinolone, and prednisone. On re-examination the following day the patient had significant swelling of his lower lip (Figure 1) and hands bilaterally (Figure 2), as well as significant dysphonia. At the time of the reaction the patient was taking lisinopril 20 mg per day and metformin 1500 mg per day. He had been taking these medications for a period of two years with no recent changes in

dosing or evident side effects. The patient was instructed to stop usage of the 5-FU cream as well as his ACE inhibitor and return to the emergency department for further treatment. He subsequently received intravenous corticosteroids and was prescribed oral prednisone. The pruritis and swelling resolved over the following 2-3 days with no return of symptoms. The patient denied any known drug allergies or prior history of a similar reaction.

Discussion

Although there has been a reported case of angioneurotic edema with use of intravenous 5-FU [1] we were unable to find reports of angioedema with topical use only. A number of cases of type I hypersensitivity skin reactions have also been reported with infusional treatment after initial topical exposure of 5-FU. [2]. Given the temporal nature of his response to the application of 5-FU, this appears to be most suggestive of a hypersensitivity reaction. It is possible that cross reactivity also occurred between 5-FU and his ACE inhibitor and their side chains as is reported in some instances of multivalent chemotherapy [3, 4]. The aforementioned also brings into question if the significant reaction to 5-FU may have triggered an angioedema response to his ACE inhibitor. To our knowledge this is the first reported case of angioedema with topical 5-FU use. Because it is a common medication used in the field of dermatology, doctors should be aware of this potential side effect and express caution when using similar agents in patients with a history of anaphylaxis, particularly those taking an ACE inhibitor.

References

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