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Case Report

Angioedema: Triggered by stress

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Abstract Angioedema is a deep swelling of subcutaneous tissue or mucosa because of increased vascular permeability. It is commonly seen as manifestation of an allergic reaction. It may occur with or without urticaria, or may be recurrent secondary to triggers like trauma, drugs, autoimmune diseases, physical or emotional stress. Severe angioedema can compromise airway patency. Avoidance of known triggering stimuli is the primary strategy in any treatment.

Key words
Angioedema, urticaria, stress.

Introduction

Angioedema is a deep swelling of subcutaneous tissue or mucosa because of increased vascular permeability. It is commonly seen as manifestation of an allergic reaction. It may occur with or without urticaria, or may be recurrent secondary to triggers like trauma, drugs, autoimmune diseases, physical or emotional stress. Severe angioedema can compromise airway patency. Avoidance of known triggering stimuli is the primary strategy in any treatment.

Case report

A serving soldier 36 years of age, resident of Sargodha presented with recurrent swelling of right eyelids and lips for one day. Swelling was sudden in onset preceded with itching and pain. It progressed to involve complete eyelid leading to ptosis of right eye. He had dry cough and running nose. Systemic enquiry of fever, abdominal pain, diarrhea, dyspnea, arthralgia and drugs were unremarkable. He was diagnosed case of chronic angioedema with urticaria since 2010, had numerous similar episodes associated with headache and hypertension. These episodes subsided within 2-3 days with antihistamines and steroids. Local examination revealed angioedema of right eyelids, upper lips and involved 15% of body surface area. His blood pressure was unremarkable. He was admitted and observed for urticaria/ angioedema episode. His investigations revealed, Blood complete picture, LFTs, RFTs, chest X-ray, ESR, Serum TSH, and CRP within normal limits. ANA, RA factor, HBs Ag, anti HCV antibodies and anti HIV antibodies were negative. C3 was 1.6g/L, C4 was 0.18g/L, serum Ig E was 451 IU/L, abdominal ultrasonography was normal. Anti ENA, C1 esterase inhibitor and anti-Ds DNA reports awaited from AFIP. He was placed on tablet Hydroxyzine 25mg three times a day, tablet Montelukast 20mg once a day, tablet Prednisolone 25mg once a day, tablet Chlorpheniramine 4mg three times a day and tablet Cimetidine 400mg two times a day. Symptoms resolved within 48-72 hours. However, he remained symptomatic for similar episodes each lasting for two to three days, once or twice in a week. He was placed on cap

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Ciclosporin 300mg OD for two weeks but angioedema and urticaria persisted so it was discontinued. His serum IgE level were raised up to 451 IU/L so he was given injection Xolair 150mg subcutaneously. Patient was considered for invalidment out of military service.

Discussion

Angioedema can occur alone or with urticaria, and shows non-pitting, non- pruritic, well-demarcated, edematous swelling that involves subcutaneous tissues mainly of face, hands, buttocks, genitals, abdominal organs, or the upper airway (i.e., larynx).[1,2]

Chronic urticaria/angioedema has traditionally been defined as wheals, angioedema or both lasting for more than 6 weeks.[3,4]

Angioedema may involve the gastrointestinal tract, leading to intestinal wall edema, which results in symptoms such as abdominal colic, nausea, vomiting, diarrhea and laryngeal attack at some point during their life.[5]

Urticaria may occur alone in about 50% of cases, urticaria with angioedema in 40%, and angioedema without wheals in 10%.[3]

Angioedema is classified into six main groups based on pathophysiology. These include hereditary, acquired, immunologic/allergic, ACE inhibitor induced, physically induced and idiopathic.[6] Chronic urticaria and angioedema tend to be idiopathic, with the release of a chemical histamine.[7] On some instances no identifiable cause can be ascribed to angioedema while on others it may be the result of a multitude of both endogenous or exogenous factors that can either be immunologic or non-immunologic.[1]

Certain factors can increase risk of developing angioedema such as past history of angioedema or hives, allergies, family history, sudden temperature changes, stress or anxiety and injury.[8]

This case is worth mentioning as in our opinion there is no evidence of any cause, the only contributing factor is stress as each time his discharge preceded, he developed the episode of angioedema due to work stress although his family history, systemic enquiry, general physical, systemic examinations and all the investigations were unremarkable. In literature the stress is commonest cause of angioedema in approximately 50-70% of cases and treated symptomatically.[9]

In conclusion stress is a potential trigger factor for angioedema. It is important for the treating physician to enquire about its role in precipitating angioedema. It is beneficial to educate the patient about it as psychosocial support/ change of environment can improve the patient.

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