

Case Report

Angioedema of Lower and Upper Lip: A Case Report

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ABSTRACT:

Angioedema is a localized temporary swelling of the skin and/or mucous membranes, that involves the submucosal and subcutaneous connective tissue, which may occur asymmetrically, usually nonpruritic. Angioedema may occur singly or be accompanied by urticaria or as a feature of anaphylaxis in mast cell-mediated disorders, bradykinin-mediated disorders, or other conditions by unknown mechanisms. Any part of the body can be affected by angioedema, especially involving the larynx, lids, lips, tongue, esophagus, and intestinal wall, but it may also occur in the feet, hands, or genitals. This study aims to treat patients with lip angioedema due to consuming dimsum which contains seafood. The case report presented was a sixty-four-year-old male who suffered from lip angioedema, with controlled hypertension. A general examination revealed no similar swelling on any part of his body. The patient has no teeth, he wears full-full dentures. The following medications were prescribed for the swelling oral tablet cetirizine 10 mg once daily for seven days. Finally, after four days, the diffuse swelling on the lower and upper lip disappear. Lip angioedema is temporary swelling of the skin/mucosa of the lips due to consuming seafood. Such angioedema can be treated with cetirizine 10 mg once daily. Risk factors must be avoided so that angioedema does not recur.

Keywords: angioedema, lip, seafood

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INTRODUCTION

Angioedema is a localized transient swelling of the skin and/or mucous membranes, which may occur asymmetrically, usually nonpruritus, mainly affecting areas associated with loose connective tissue characterized by vasodilatory reactions involving mast cells and bradykinin.¹⁻³ Clinical manifestations that distinguish angioedema from other types of edema. Angioedema may occur singly or accompanied by urticaria, or as a sign of anaphylaxis in mast cell-mediated disorders, bradykinin-mediated disorders, or in other conditions by an unknown mechanism. Almost any part of the body can be affected by angioedema, especially involving larynx, lids, lips, tongue, esophagus, and intestinal wall, but it may also occur in the feet, hands, or genitals.¹⁻⁶ When it occurs in the larynx, it causes choking due to blockage of airways, and it can be fatal.⁷ In contrast, intestinal angioedema causes stomachaches, interferes with regular bowel movements, and looks like acute appendicitis.² Angioedema refers to the swelling of the lower layers of the skin, usually around the mouth, or of mucosa or submucosa of the mouth or throat,

which can quickly appear in response to an allergen or intolerance to food, as a sign of side effect or allergy to medication, an allergen in the surrounding environment, such as pollen, pet dander, and venom from insect bites or due to other conditions such as hereditary.^{3,4}

CASE PRESENTATION

The case report presented was a sixty-four-year-old male coming to a clinic who suffered from swelling on his lower and upper lip for the past one day. On eliciting the history of presenting illness, the patient had dim sum consumption as breakfast followed; within three hours, he felt swelling on the lower and upper lip. His family history was non-contributory. A general examination revealed no similar swelling on any part of his body. He has also controlled hypertension. Extra oral examination, there was no cervical lymphadenopathy or fever, and his vital sign was stable (Figure 1).

Figure 1: Extraoral examination revealed a diffuse swelling on the lower and upper lip



He also had no difficulty in breathing, excluding laryngeal involvement. On palpation, the swelling was soft in consistency, non-pitting, and non-tender. Correlating the history of a diffuse onset on the lower and upper lip with a history of sudden onset in a three hours, and no record of any trauma or fever. Intraoral examination; The patient has no teeth (edentulous), he wears full-full dentures, and the oral mucosa and tongue showed no abnormalities. The following medications were prescribed for the swelling oral tablet cetirizine 10 mg once a day for seven days.⁸ Finally, after four days, the diffuse swelling on the lower and upper lip was disappear (Figure 2).

Figure 2: Follow up post-treatment photograph after four days showed complete resolution of the swelling of the lower and upper lip



DISCUSSION

Angioedema is a localized transient swelling of the skin and/or mucous membranes, which may occur asymmetrically, usually nonpruritic, mainly affecting areas associated with loose connective tissue characterized by vasodilatory reactions involving mast cells and bradykinin. Clinical circumstances distinguish angioedema from other types of edema.^{1,2} Angioedema may occur singly or be accompanied by urticaria or as a feature of anaphylaxis in mast cell-mediated disorders, bradykinin-mediated disorders, and in other conditions by an unknown mechanism, such as infection, an uncommon disorder. In mast cell-mediated angioedema, other signs and symptoms of released mast cell mediators are frequently seen.^{3,4} In contrast, bradykinin-induced angioedema was not associated with urticarial, or other symptoms of a quick allergic reaction. Clinical response to antihistamines is a key feature of mast cell-mediated angioedema, also known as histaminergic angioedema, whereas bradykinin-mediated angioedema is non-histaminergic, or refractory to antihistamine therapy.^{3,4} In this case report, the probable causes and clinical features of angioedema, with a focus on angioedema resulting from eating dim

sum which contains seafood. Pathophysiologically, the clinical manifestations of angioedema are: mast cell-mediated and bradykinin-mediated angioedema. Mast cell mediated angioedema is usually accompanied by features and manifestations of mast cell mediator release, for example: urticaria, these signs start relatively quickly up to a few hours after exposure to the allergen, and resolve around 48-72 hours,⁹ and will usually respond to antihistamine treatment. Bradykinin-mediated angioedema covers a spectrum of extremely rare disorders that are not associated with urticaria, or with other manifestations of an allergic or anaphylactic reaction.⁹ Bradykinin-mediated angioedema generally develops within hours or days, the link between cause and manifestation is less obvious and resolves in two to four days.²⁻⁵ Other signs, this angioedema has no effect on antihistamine therapy and does not respond to corticosteroids, but epinephrine will be useful for mild clinical symptoms. Almost any part of the body can be affected by angioedema, especially the extremities, larynx, palpebral, lips, tongue, esophagus, and intestinal wall.¹⁻⁵

The type of angioedema: allergic angioedema and Non-allergic drug-induced angioedema; hereditary angioedema (HAE), idiopathic angioedema, acquired angioedema.^{2,3,5,10} Allergic angioedema is the most common, it may occur due to reactions to food, medication, or other allergies. Some potential causes include latex, peanuts, insect biting, antibiotics, and shellfish.⁵ Non-allergic drug-induced angioedema occurs when a person has a nonallergic reaction to the medication. The difference with allergic angioedema, namely that reactions due to the lack of hives or itchiness. Drug-induced angioedema is the second most common type of angioedema, a common cause includes angiotensin-converting enzyme inhibitors, of common blood pressure medication. Hereditary angioedema (HAE) is less common than allergic or drug-induced angioedema.⁴ It occurs when you inherit a deficiency or defect in an enzyme in the complement pathway, which makes up part of the immune system. The prevalence HAE is 1:50,000.⁶ Idiopathic angioedema occurs when one cannot find a cause for angioedema. Acquired angioedema may also develop after an infection or illness, such as lupus. Autoimmune disease can also cause this type of angioedema. Factors that increase the risk of angioedema are age over 65 years, having ACEI-induced angioedema, having coexistent cardiopulmonary disease, and smoking.¹¹ If you have allergies, try to avoid known triggers because this may cause angioedema. Other risk factors may include a previous occurrence of angioedema or hives, a previous allergic reaction, a family history of angioedema or hives, sudden temperature changes, stress or anxiety, and certain medical conditions. In this case report, the patient experienced angioedema due to a dimsum breakfast containing seafood, so after consuming dimsum three hours later, angioedema

occurred. A sixty-five-year-old male patient is at risk for developing angioedema, after all, he has controlled hypertension. The following medications were prescribed for the swelling oral tablet cetirizine 10 mg once a day for seven days.⁹ Finally, after four days, the diffuse swelling on the lower and upper lip was disappear

CONCLUSION

Lip angioedema is temporary swelling of the skin/mucosa of the lips due to consuming seafood. Such angioedema can be treated with cetirizine 10 mg once daily. Risk factors must be avoided so that angioedema does not recurrent.

REFERENCES

1. Kalambay J, Ghazanfar H Martes Pena K A et al. (2017). Pathogenesis of drug-induced non-allergic angioedema: A review of unusual etiologies. *Cureus* 9(8):e1598 DOI 10.7759/cureus.1598
2. Kaplan AP, Greaves MW (2005). Angioedema. *J Am Acad Dermatol.* 53:373-88
3. Angioedema,(2022),<https://pubmed.ncbi.nlm.nih.gov/30860724/>.
4. Ghazi A, Grant JA. (2013). Hereditary angioedema: epidemiology, management, and role of icatibant. *Biologics.* 7:103-13. 10.2147/BTT.S27566
5. Kulthanan K, Jiamton S, Boochangkool K, et al.(2007) Angioedema: clinical and etiological aspects. *ClinDevImmunol.* 1-6. 10.1155/2007/26438.
6. Grigoriadou S, Longhurst HJ (2009): Clinical immunology review series: An approach to the patient with angioedema. *ClinExp Immunol.*155:367-77. 10.1186/s12913-017-2274-4
7. Bernstein JA, Cremonesi P, Hoffman TK, et al. (2017). Angioedema in emergency department: A practical guide to differential diagnosis and management. *Int J Emerg Med.* 10:15. 10.1186/1471-230X-14-71
8. Termino VM, Peebles RS, (2008). The spectrum and treatment of an Angiodema. *Am .j Med.*121:282-6.
9. De Knop, KJ, Hagendoren MM, Stevens WJ, De Clerk LS, Ebo. (2009). Angioedema beyond histamine an educational case series. *ActaClinica.* 64-6
10. Bas M, Adams V, Suvorava T, Niehues T, Hoffmann TK, Kojda G. (2007). Nonallergic angioedema: role bradykinin, *Allergy.* 62:842-56.
11. Loftus, P. A., Tan, M., Patel, G., Lin, J., Helman, S., Badhey, A., Du, E., Smith, R. V., Fried, M. P., & Ow, T. J. (2014). Risk factors associated with severe and recurrent angioedema: an epidemic linked to ACE-inhibitors. *The Laryngoscope,* 124(11), 2502–2507. <https://doi.org/10.1002/lary.24777>