IOSR Journal of Dental and Medical Sciences (IOSR-JDMS)
e-ISSN: 2279-0853, p-ISSN: 2279-0861.Volume 23, Issue 8 Ser. 4 (August. 2024), PP 36-37
www.iosrjournals.org

A Rare Case Of Maxillofacial Angioedema Post Septoplasty-A Case Report

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Date of Submission: 03-08-2024 Date of Acceptance: 13-08-2024

I. Introduction:

We hereby report a rare case of maxillofacial angioedema following local anaesthesia with lignocaine post a septoplasty even after doing a skin sensitivity test pre-operatively.

II. Case Report

23-year-old female patient presented with bilateral watery nasal discharge and left nasal obstruction for the the past 3 years. She had persistent episodes or sneezing and recurrent upper respiratory tract infections. Her CT showed Minimal bilateral maxillary and ethmoid sinusitis with DNS to left with spur [Fig I]. Preoperatively started on injection ceftriaxone after patch test and lignocaine sensitivity was also assessed, she underwent septoplasty on 26/4/24.Intraoperatively 7ml of 2% lignocaine with adrenaline (1:100000) was used to infiltrate the septum. The floor of nose was infiltrated via inferior portion of columella above the lips, immediately patient developed on table tachycardia, with heartrate reaching 130-140 bpm. Procedure was completed successfully, and bilateral nasal packs were placed. Four hours post operatively swelling started developing around the lips which progressively increased in size, the following day patient developed swelling which progressed to the eye [Fig II, III]. The swelling was non pruritic, non-tender, non-pitting and no ulcer or erosion noted. She was started on injection hydrocortisone and stat injection avil was administered, swelling around the eye reduced. All the vital parameters were normal, no respiratory distress noted. Patient was kept under observation and detailed family history was taken showing no relevance. On post operative day 2 nasal packs were removed swelling reduced further [Fig IV], dermatology opinion sought suspecting drug allergy to lignocaine, was adviced to stop all intravenous medication and take Tablet. Atarax for 2 weeks. Patient significantly improved and was discharged on post operative day four. The patient was diagnosed to have acute allergic angioedema of upper lip. The criteria of sudden onset swelling, oral mucosal region involvement, absence of pruritis, pain, erythema, pitting and resolution of symptoms in 24hrs was the criteria pointing to diagnosis of angioedema.

III. Discussion

The transient, localized, nonpitting swelling of the subcutaneous layer of the skin or submucosal layer of the respiratory or gastrointestinal tracts is defined as angioedema [1]. Diffuse swelling of the oral submucosal tissues is maxillofacial angioedema [1], which is common in young women, and it lasts between 24 and 96 hours as seen in our case [2]. Similar to our study which was seen in a 23-year-old female another similar upper lip swelling was reported as an adverse reaction to local anaesthetic agent in a 23-year-old female patient post a dental procedure [3]. This is mostly classified as allergic, pseudo allergic, or nonallergic atopic eczema (AE). There are two types acquired and familial angioedema, both are caused by a deficiency or qualitative defect of, or antibody against C1 esterase inhibitor, a component of the complement system. A rapid onset (minutes to hours) of action is noted in angioedema and is asymmetric in distribution. It often involves the lips, throat, or bowel and is usually not found in dependent areas [4]. The pathophysiology is from vascular leakage leading to release of vasoactive mediators such as histamine, serotonin, and bradykinin with extravasations of fluid causing edema. This can lead to significant laryngeal edema resulting in death [5].

A 79-year-old undergoing blepharoplasty also reported angioedema to eyelids post procedure. Literature review shows two other reports of periorbital reaction to lidocaine [6,7]. A diagnosis of drug induced angioedema was made in a 57-year-old male undergoing direct laryngoscopy and biopsy for laryngeal growth [8]. Patients reporting such adverse reaction by protocol should undergo prick and intracutaneous testing should be carried out with the suspected drug.

Latex allergy should be excluded in such patients undergoing surgical procedure. Specific IgE can also be done, however in these cases skin testing and specific IgE is less than 10% positive [9]. Our patient had undergone skin testing prior still developed reaction to the drug. There is a presumption that the mechanism underlying the response is a direct release of histamine induced by lidocaine in the above-mentioned cases. Local

anaesthetic solutions have additives such as antioxidants or preservatives (metabisulphite or parabens) which can cause such adverse effects [6]. The dose of local anaesthesia should never exceed 15 U/ml. Technique of administration also plays a crucial role, in this case patient had reacted immediately intra operatively to the anaesthetic agent, hence we should watch out for adverse effects in these patients. In this study the patient was treated with corticosteroids and antihistamines, although their therapeutic effect was not proven [8].

IV. Conclusion

Adverse effects to local anaesthetic agent even after skin sensitivity patch test is to watch out for particularly in maxillofacial region as the skin is thinner and laxer here.

Acknowledgements:

We are thankful to the family and the patient for the support towards our research.

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