

## **Case Report 1**

### **Angioedema Associated with Haloperidol**

**Abdulmajeed Brahim AlMadhyan MD**

#### **Abstract**

Haloperidol is one of the antipsychotic medications which are widely used in the emergency department and its association with angioedema which is very rarely reported in scientific literature. One of the serious situations in the emergency department is angioedema and it bends airway obstruction which is need early attention and treatment. A case was reported which was observed at a governmental hospital in Riyadh. An adult female developed angioedema after single dose of Haloperidol intramuscular injection after coming to emergency department for agitation.

#### **Correspondence:**

**Abdulmajeed Brahim AlMadhyan, MD**  
College of Medicine ,Qassim University,KSA  
Department of Emergency Medicine  
Email: [Abdulmajeed5@hotmail.com](mailto:Abdulmajeed5@hotmail.com)  
[MOBILE :00966552229822](tel:00966552229822)

## Introduction

Haloperidol is one of the Butyrophenone classes of antipsychotic medications. It has a common side effect which is extrapyramidal symptoms. Less common side effect of Haloperidol administration like orthostatic hypotension and ECG changes. Angioedema is very rare side effect of haloperidol. This female patient developed this side effect as anaphylaxis to Haloperidol administration in short time span of intramuscular injection, and this was a disastrous situation to our department. The angioedema (tongue swelling and laryngeal swelling) obstructed the patient air way and ended with tracheostomy in the operation room. The symptoms was resolved after 48 hours.

## Case Report

A 47 year old female, a known case of Diabetes mellitus, hypertension and schizophrenia, who was already on Insulin, Nifedipine, Venlafaxine, Zolpidem and Clonazepam medications. She had allergy for Voltaren medication with no past medical history of angioedema. She was brought in the emergency department by family with agitation and restlessness. Patient was seen by emergency physician attending the emergency and prescribed Midazolam 5 mg intramuscular, with no response, mediation was repeated at the same dose of Midazolam after 5 minutes. Again, there was no response, the physician decided to administer Haloperidol 10 mg intramuscular again then after 10 minutes the patient developed tongue swelling and protrusion.



Patient blood pressure was: 110/65mm of Hg, Heart Rate: 98 beat/mint, Respiratory Rate: 19/mint, Temperature: 36.3 C and Oxygen saturation at 100% on room air. Physical examination: General look; no rash or erythema, no stridor, Cardiovascular; Normal, Chest; equal air entry and no added sound, abdomen: Normal, Central nervous system; agitated patient. Patient was administered Diphenhydramine 50 mg intramuscular and Epinephrine 0.5 mg intramuscular and then the symptoms subsided and tongue swelling reduced. After a span of 5 minutes the patient again developed angioedema which was, this time, severe and resistant to Epinephrine. The Patient dropped her oxygen saturation and, anesthesia plus ENT specialist were contacted for possible tracheostomy. The patient was sent to operation room and tracheostomy performed. The patient was kept under further observation and after 3 days, the symptoms had subsided again and, the angioedema was improved. The patient was continued with her treatment of other medical condition requiring treatment.

## Discussion

Haloperidol is widely used in the emergency department in patient with agitation, mania and, psychosis condition. Haloperidol acts on dopamine receptors, sigma, 5HT1A, histamine, muscarinic and alpha receptors. The Tmax of haloperidol is 20 minutes in healthy individual and, 33.8 minutes in schizophrenic patients when given intramuscularly. As we mentioned above, the angioedema with haloperidol is a rare condition. It has been reported earlier in one case in Metropolitan Hospital, New York, USA <sup>(1)</sup>. That case happened in an adult patient who developed angioedema after intramuscular injection of Haloperidol and was resolved after administration of Diphenhydramine and Epinephrine. When this case was compared to presented report, it was found that this recent report is resistant to Diphenhydramine and Epinephrine and, it ended in airway obstruction and tracheostomy, which indicated that Haloperidol can produce severe angioedema that may be resist to Diphenhydramine and repeated doses of Epinephrine. However, other antipsychotic

medication that has been reported to produce angioedema is Droperidol. <sup>(2, 4)</sup>

### Conclusion

With this case report, it is recommended that this type of medication, Haloperidol, should be given in monitored condition to patient and patient should be observed for some time till 48 hours before he/she is discharged from the hospital. Now, that there are two cases of angioedema, these medication need careful evaluation and further study in relation to their possibilities of generating adverse side effect.

### References:

1. [Cathy Lee](#), and [Roger Chirugi](#), [Getaw Worku Hassen Samrina Kahlon](#), Angioneurotic Edema Associated with Haloperidol  
Metropolitan Hospital Center, New York Medical College, New York, NY 10029, USA.
2. J. F. Palombaro and C. E. Klingelberger, "Angioedema associated with droperidol administration," *Annals of Emergency Medicine*, vol. 27, no. 3, pp. 379–381, 1996.
3. P. J. Corke and G. Murray, "Angio-oedema with droperidol," *Anaesthesia and Intensive Care*, vol. 21, no. 3, p. 375, 1993. R. J. Clark, "Tongue-swelling with droperidol," *Anaesthesia and Intensive Care*, vol. 21, no. 6, p. 898, 1993.
4. T. C. Evans and R. J. Roberge, "Quincke's disease of the uvula," *American Journal of Emergency Medicine*, vol. 5, no. 3, pp. 211–216, 198.