

## A Case of Accidental Injection of Epinephrine (Epipen®)

Kazara Epinefrin (Epipen®) Enjeksiyonu Olgusu

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### Dear Editor,

Prompt injection of epinephrine is of fundamental importance in the treatment of systemic anaphylaxis (1). For the prehospital treatment of anaphylaxis, epinephrine autoinjectors in the form of Epipen® are commonly recommended, because they provide advantages of an easy-to-use, sterile, premeasured single dose delivery. Side effects may include increased heart rate and stronger or irregular heartbeat. We present a case which developed an atrial fibrillation with rapid ventricular response following accidental delivery of epinephrine through Epipen injection. A previously healthy 44 year old male patient admitted to the emergency department (ED) complaining of rapid heart beat. During the history taking, patient stated he accidentally injected his left thumb with epinephrine (Epipen® 0.3 ml 0.3 mg 1/1000), which was prescribed for one of his relatives, 15 minutes prior to the ED visit. Patient complained of headache, widespread numbness and rapid heart beat. On physical exam, patient was found to be fully alert and oriented, with blood pressure of 120/80 mmHg, pulse 147 bpm, temperature 36°C. His heart sounds were normal and other systemic exam revealed no abnormality. His initial EKG showed atrial fibrillation with rapid ventricular response at a rate of 145. 5 mg metoprolol was administered, which caused the cardiac rhythm to turn into normal sinus. Patient was observed for 12 hours during which time he had no other episode of tachycardia and his cardiac enzyme values turned out to be normal. Patient was discharged with instructions. Epinephrine auto-injectors are used

for the emergency treatment of severe allergic reactions, by the patients who are at increased risk for these reactions. Side effects may include increased heart rate, stronger or irregular heartbeat, sweating, difficulty breathing, dizziness, headache, nervousness, or anxiety (2). These side effects usually go away quickly, especially if patients rest. For patients experiencing high blood pressure, overactive thyroid, heart disease, these side effects may present more severe or last longer. Other side effects of accidental injection of epinephrine severe pain on the injection side even due to severe local vasoconstriction (3). Our patient did not experience any of the complications stated here, but instead he experienced cardiac side effects. The atrial fibrillation with rapid ventricular response turned to normal sinus rhythm following the administration of single dose of beta blocker. As a result, emergency physicians who are concerned about the proper use of epinephrine autoinjectors should receive adequate instruction on their use and potential side effects.

### References

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3. Fitzcharles-Bowe C, Denkler K, Lalonde D. Finger injection with high-dose (1:1,000) epinephrine: does it cause finger necrosis and should it be treated? *Hand*. 2007; 2: 5-11. [CrossRef]