

INTRODUCTION

- Angiotensin-converting enzyme inhibitors (ACEI) are the leading cause of drug-induced angioedema.
- Diagnosis is mainly clinical.
- Primary treatment is supportive however new therapies including Fresh Frozen Plasma (FFP), icabitan and tranexamic acid are emerging.
- We describe a successful use of FFP with quick resolution of symptoms.

CASE DESCRIPTION

- 34-year old female with past medical history of recently diagnosed hypertension presented to an urgent care clinic with sudden onset of left eye lid swelling, dyspnea, drooling and pruritus.
- Five days prior she had started ACEI therapy.
- Patient was given IV steroids, antihistamines, three doses of IM epinephrine without improvement.
- She was started on epinephrine drip and transferred to our ED.

CASE DESCRIPTION

- Vital signs were stable
- Physical exam revealed mild respiratory distress without accessory muscle use, left eye, cheek, lip, uvula and posterior oropharynx swelling.
- Given significant tachycardia epinephrine drip was stopped and two doses of FFP were ordered.
- Immediate relief of dyspnea was observed.
- Complete resolution of symptoms was noted 3 hours after FFP administration.
- She was admitted for close airway monitoring and was discharged two days later.

FFP MECHANISM OF ACTION

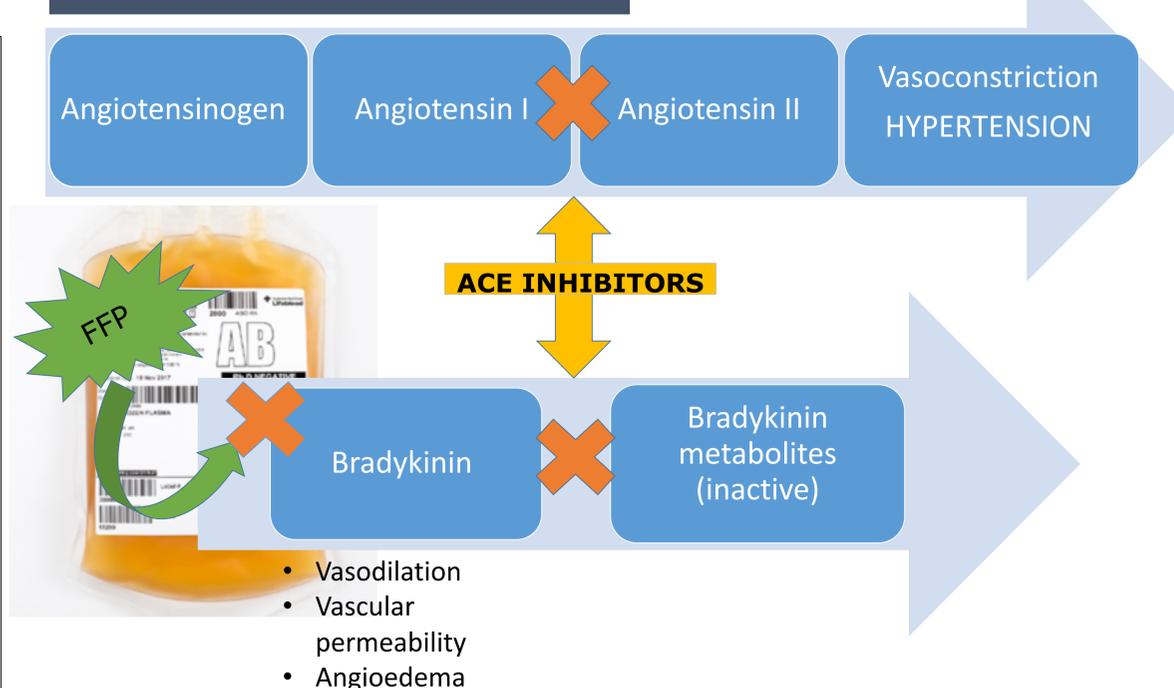


Fig.1 FFP contains enzyme ACE and degrades high levels of bradykinin

DISCUSSION

- ACEI-induced edema can be clinically indistinguishable from allergic or anaphylactic reaction.
- Several therapies effective in hereditary angioedema have been successfully used in ACEI-induced angioedema.
- These include icabitan, ecallantide, tranexamic acid, purified C1 inhibitor concentrate and FFP.
- FFP contains ACE enzyme that decreases bradykinin levels as seen in **Fig.1**.
- Up to 46% patients may experience recurrence in the first few months despite discontinuation of ACEI.
- Acutely, close monitoring is crucial as airway obstruction occurs in 10% of cases.

CONCLUSIONS

- FFP is a relatively cheap and easily accessible treatment for a potentially life-threatening condition.

REFERENCES

1. Hassen, Getaw Worku, et al. "Fresh frozen plasma for progressive and refractory angiotensin-converting enzyme inhibitor-induced angioedema." *The Journal of Emergency Medicine* 44.4 (2013): 764-772.
2. Vleeming, Wim, et al. "ACE inhibitor-induced angioedema." *Drug Safety* 18.3 (1998): 171-188.