

# INCIDENCE OF OROLINGUAL ANGIOEDEMA AFTER INTRAVENOUS THROMBOLYSIS FOR STROKE

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**Introduction.** Orolingual angioedema (OA) is a known adverse effect of intravenous (i.v.) alteplase (1-3). We analyzed the patients treated with i.v. alteplase for stroke at our hospital since approval of i.v. thrombolysis in Italy in 2004 to assess the incidence of this complication

**Patients and Methods.** All patients treated with i.v. alteplase for stroke since 2004 were prospectively included in a computerized registry which included age, sex, race, severity of stroke according to the NIHSS, alteplase dose, glucose levels before treatment and ASPECTS score. Complications of alteplase, including symptomatic hemorrhage, death, fibrinogen level after thrombolysis, and orolingual angioedema were recorded as well.

**Results.** Four-hundred-thirty-three (**433**) patients received alteplase for stroke from April 2004 to May 2017. There were 251 men and 182 women. Mean  $\pm$  SD age was  $67.1 \pm 13.1$  years. **Two patients** developed OA (**0.4%; 95% Confidence Interval 0.1 to 1.6%**). One was a **59-year-old woman of African origin**, who developed a mild edema of the lips and tongue, without side asymmetry, lasting 12 hours. The second was an **83-year-old Caucasian woman** who developed an anaphylactoid reaction, with massive swelling of the lips, tongue, and oropharyngeal mucosa, and oropharyngeal bleeding, about 30 minutes after ending the alteplase infusion, and required intubation. Corticosteroids and adrenalin were acutely administered. She recovered from the oedema in 36 hours, but died because of brain herniation after 5 days, without brain hemorrhages. She had had a previous severe allergic reaction to strawberries. None of our patients used ACE-inhibitors.

**Discussion.** Orolingual angioedema has been described in 0.9 to 7.9% of patients receiving i.v. thrombolysis for stroke (1-3). It is usually of mild intensity, but anaphylactoid reactions may rarely occur, because of the variable degree of activation of the complement system and kinin cascade caused by alteplase (3). The incidence of OA was very low in our series. This difference may suggest that we have missed a few mild cases of OA, though this seems unlikely. Although usually mild, this complication may be severe enough to require admission to neurointensive care, as in our second case. Thus, it represents one specific item to monitor during alteplase infusion and the following hours.

## References

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