

Clinical photo: angioedema by N-acetylcysteine and angiotensin-converting enzyme inhibitor

臨床照片：在乙醯半胱氨酸及血管緊張素轉化酶抑制劑治療中的血管性水腫

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An 87-year-old man with hypertension, ischaemic heart disease and heart failure, on long term drug therapy including enalapril, attended our emergency department 12 hours after an intentional overdose of 15 g of paracetamol. N-acetylcysteine (NAC) intravenous infusion was started empirically with the initial loading dose of 150 mg/kg in 15 minutes. The paracetamol level was later confirmed to be above the treatment line in the nomogram.

He developed tongue swelling 45 minutes after the initiation of NAC (Figure 1). NAC was stopped immediately. Chlorpheniramine 10 mg, hydrocortisone 200 mg and normal saline were given intravenously. He was then transferred to the intensive care unit (ICU) with the diagnosis of angioedema of the tongue. In the ICU, his condition was stable and did not require intubation. The swelling of his tongue gradually subsided on day two. The paracetamol overdose was treated by oral methionine and he did not develop any further allergic reaction or liver injury.

NAC is an effective antidote for paracetamol poisoning. The intravenous NAC has a reported anaphylactoid reaction rate of 3 to 23%.¹⁻³ Most reactions are mild and develop between 15 to 60 minutes after the initiation of NAC infusion. Most of the reactions are not true anaphylaxis. For mild reactions like simple rash or urticaria, transiently stopping the NAC, giving anti-histamines and steroids usually result in symptom resolution. The NAC infusion can then be re-started at a slower rate with close monitoring. Fatal anaphylactoid reaction is rare but has been reported in asthma patient.⁴ Angioedema can occur with NAC.^{1,3,5} Angioedema is also well reported in patients on angiotensin-converting enzyme inhibitor (ACEI).⁶ The overall incidence of ACEI-induced angioedema has been reported to be around 0.1 to 0.2% and can occur at anytime during the ACEI therapy. In our patient, we believed both



Figure 1. Photo of the patient showing significant angioedema.

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NAC and ACEI might contribute to the angioedema. In future, we would suggest close monitoring and preparedness for potential upper airway obstruction when giving NAC to patients currently on ACEI. The use of a slower loading rate of 60 minutes instead of 15 minutes may also reduce the chance of anaphylactoid reaction.

References

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