Late-onset angioedema due to an angiotensin-converting enzyme inhibitor

Pablo Garcia-Pavia MD¹, Jose M Tomas MD², Luis Alonso-Pulpón MD PhD¹

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Angioedema is a rare but potentially life-threatening adverse effect of angiotensin-converting enzyme inhibitors. A patient who presented with facial angioedema four months after initiating antihypertensive treatment with enalapril is described. Angioedema due to angiotensin-converting enzyme inhibitors usually appears during the first weeks of treatment. Late-onset angioedema is often unrecognized.

Key Words: Angioedema; Angiotensin-converting enzyme inhibitor; Hypertension; Late onset

Un œdème de Quincke à apparition tardive causé par un inhibiteur de l'enzyme de conversion de l'angiotensine

L'œdème de Quincke est une réaction indésirable rare au potentiel fatal des inhibiteurs de l'enzyme de conversion de l'angiotensine. On décrit le cas d'un patient qui a consulté pour un œdème de Quincke facial quatre mois après avoir entrepris un traitement antihypertenseur à l'énalapril. En général, l'œdème de Quincke causé par un inhibiteur de l'enzyme de conversion de l'angiotensine se déclare pendant les premières semaines du traitement. Les œdèmes de Quincke à apparition tardive restent souvent non diagnostiqués.

A 69-year-old man with Parkinson's disease and essential hypertension was admitted to the emergency department because he could not open his eyes on waking from sleep (Figure 1). He was otherwise asymptomatic, with no pain, fever or airway compromise. The patient had no history of allergies and had not been exposed to insects, plants or products that may have caused an allergic reaction; laboratory tests showed no abnormalities. An ophthalmological evaluation and an orbit computed tomography scan showed normal findings except for soft tissue edema. Medications included cinitapride and lactitol for constipation, as well as levodopa and carbidopa during the

past four years. Enalapril 10 mg/day had been initiated four months earlier with good blood pressure control. A diagnosis of late-onset angioedema caused by an angiotensin converting-enzyme inhibitor (ACEI) was proposed. Enalapril was withdrawn in the emergency room; during the next 24 h, the angioedema improved and the patient's eyes could gradually be opened. He was discharged with local and systemic steroids for one week. Four weeks later, the angioedema had disappeared (Figure 2) and the patient's hypertension was being treated with amlodipine. On the last follow-up (three months later), there had been no recurrences.

Figure 1) Facial angioedema. Prominent swelling of the face (especially at the eyelids) that precludes eyes opening is shown

Figure 2) Resolution of the angioedema four weeks later. Facial edema has disappeared and eyes can be opened

¹Department of Cardiology; ²Department of Ophthalmology, Puerta de Hierro University Hospital, Madrid, Spain

Correspondence: Dr Pablo Garcia-Pavia, Department of Cardiology, Puerta de Hierro University Hospital, San Martín de Porres, 4, 28035 Madrid, Spain. E-mail pablogpavia@yahoo.es

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Angioedema is a rare but potentially life-threatening adverse effect of ACEIs. Angioedema occurs in 0.1% to 0.7% of patients on ACEIs, but the association is not always recognized (1,2). The effect is idiosyncratic and unpredictable. It is more likely to occur in black patients, those older than 65 years of age and in those with a history of drug-related rash or seasonal allergies (1). Although the onset typically occurs within the first weeks of ACEI therapy (3), cases with latencies ranging from several months to several years have been reported (4). In patients with such an atypical course, the diagnosis may be missed.

REFERENCES

1. Kostis JB, Kim HJ, Rusnak J, et al. Incidence and characteristics of angioedema associated with enalapril. *Arch Intern Med* 2005;165:1637-42.
 2. Sabroe RA, Black AK. Angiotensin-converting enzyme (ACE) inhibitors and angio-oedema. *Br J Dermatol* 1997;136:153-8.
 3. Hedner T, Sameulsson O, Lunde H, Lindholm L, Andren L, Wiholm BE. Angio-edema in relation to treatment with angiotensin converting enzyme inhibitors. *BMJ* 1992;304:941-6.
 4. Sondhi D, Lippmann M, Murali G. Airway compromise due to angiotensin-converting enzyme inhibitor-induced angioedema: Clinical experience at a large community teaching hospital. *Chest* 2004;126:400-4.
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