Letters and Replies

The unusual patient with advanced renal insufficiency on ACE inhibitors

Sir,

The case history ‘The unusual patient with advanced renal insufficiency on ACE inhibitors. What is the explanation for her persisting hypokalaemia?’ [1] emphasizes that in such a patient one should keep the possibility of an adrenal adenoma in mind. When we discussed this case in our journal club all the participants came to the same conclusion as the authors regarding the diagnosis. However, no consensus was reached about the described methodology, i.e. obtaining serum samples for renin and aldosterone measurements while the dose of captopril remained unchanged. According to some of the participants one should only measure renin and aldosterone after a 4–6 week cessation of ACE inhibitor therapy [2]. Others argued that one can measure aldosterone but not renin during ACE inhibition. In such a situation, an elevated serum aldosterone would be very specific for an adrenal adenoma, whereas an increase in serum renin by more than 100%—even in essential hypertension—might be expected [3]. Of course, some participants agreed on the described methodology and they were also puzzled over the increased renin level. Our journal club would be very interested to know the expert opinion of the requisites for renin and aldosterone measurements in hypertensive patients with persisting hypokalaemia while taking ACE inhibitors.

Department of Medicine
Albert Schweitzer Hospital
J. P. van der Sluijs
P.O. box 306
3300 AH Dordrecht
The Netherlands


Reply

Sir,

Dr Van Hoogstraten and collaborators discuss the methodology of serum renin and aldosterone determinations in our patient with primary aldosteronism and advanced renal insufficiency due to diabetic nephropathy [1]. We agree that samples for serum determinations of renin and aldosterone should preferably be obtained after the cessation of any drug that could modify the renin-angiotensin-aldosterone axis. However, in patients with severe arterial hypertension this attitude should be balanced with the risks of hypertensive crises or other complications derived from medication withdrawal. Our patient (longstanding arterial hypertension, advanced renal insufficiency, diabetes mellitus, coronary disease) was in a delicate medical equilibrium and consequently we preferred to obtain serum samples while taking her usual captopril doses. We think that the finding of a very high serum aldosterone level is very suggestive of primary aldosteronism, as our case exemplified. It is possible that the atypically elevated plasma renin found in our case could partially be induced by ACE inhibition [2], but other cases of primary aldosteronism in patients with renal insufficiency also showed elevated serum renin in the absence of this treatment [3,4]. From a practical point of view, we think that determinations of renin and aldosterone in some patients with severe and unstable clinical conditions may be obtained while taking ACE inhibitors.

Servicio de Nefrologia
Hospital 12 de Octubre
Madrid
Spain


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