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LETTER TO THE EDITOR

Response to "Acetazolamide and Cardiac Failure"

Tomasz Imiela[1] · **Andrzej Budaj**[1]

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To the Editor,

Dr. Cimolai raised an important concern regarding the use of acetazolamide in heart failure, namely its adverse effects [1]. We agree that the short duration of acetazolamide therapy in our study limited the potential occurrence and reporting of adverse effects.

Since direct influence of the drug on the heart muscle was not largely studied (especially in humans), we would like to point toward another mechanism of action, which may present a threat for patients. By blocking renal carbonic anhydrase, acetazolamide causes urine alkalosis and blood acidosis [2]. Acidosis, in particular metabolic acidosis, may be a sign of tissue hypoperfusion and a marker of poor prognosis in patients with acute heart failure [3]. Furthermore, aggravating acidosis with acetazolamide treatment may be dangerous. As the change in blood pH after initiation of acetazolamide therapy is usually rapid, adverse effects due to acetazolamide-induced metabolic acidosis usually occur during the first days of treatment (at least in some groups of patients) [4]. Acetazolamide use in patients with acute heart failure should be preceded by blood and urine pH measurements. As both blood alkalosis and urine acidosis may worsen prognosis in patients with acute heart failure, acetazolamide could be beneficial in selected patients with acute heart failure [5, 6].

There are few contemporary studies regarding the use of acetazolamide in heart failure patients. We agree with Dr. Cimolai that it is essential to conduct up-to-date research on carbonic anhydrase inhibitors. The adverse effects of acetazolamide should be strictly monitored and reported.

Compliance with Ethical Standards

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Conflicts of interest Tomasz Imiela and Andrzej Budaj declare no conflicts of interest.

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✉ Tomasz Imiela
tomasz.imiela1@gmail.com

[1] Cardiology Department, Postgraduate Medical School, Grenadierow 51/59, 04-073 Warsaw, Poland