

Adherence to adrenaline autoinjector prescriptions in patients with anaphylaxis

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Background: First line treatment for anaphylaxis is intramuscular adrenaline. Adherence depends on different factors such as available prescription for and retrieval of the adrenaline device at the pharmacy, that the patients carry the autoinjector, and understanding of the disease and why, how and when to use adrenalin.

Objective: To determine adherence to adrenaline autoinjector (AAI) prescriptions in a cohort of well-characterized patients with anaphylaxis.

Methods: A retrospective analysis of data on adherence to prescription of AAIs in a cohort of anaphylaxis patients identified during one consecutive year in the emergency department (ED), Odense University Hospital (OUH) followed by diagnostic work-up at the Allergy Center, OUH. Data on retrieved prescriptions was obtained from Odense Pharmacoepidemiological Database (OPED). The endpoint was adherence to AAI prescriptions from the index date (ED visit) and one year after ED visit in relation to the elicitor and severity of the anaphylactic reaction, age, sex and comorbidity.

Results: A prescribed AAI was retrieved from pharmacy by 76% (53/79) of all patients with confirmed anaphylaxis; 77% (20/26) with food anaphylaxis, 77% (26/34) with venom anaphylaxis and 70% (7/10) where no elicitor could be identified (children 100%, adults 50%). Significantly more patients with severe (grade 4-5) anaphylaxis retrieved an adrenalin autoinjector ($p < 0.02$) compared to those with mild to moderate (grade 1-3) anaphylaxis. The largest proportion of non-adherent patients was in the age group between 18-35 years, whereas no significant gender differences were found.

Conclusions: This study highlights the need for patient education, to ensure and strengthen adherence, since only 3 of 4 anaphylaxis patients retrieved their prescription of an AAI, even in this specialized hospital-based setting. A special focus should be on the age group of 18-35 years, and adults where no elicitor could be identified.