DRUG THERAPEUTIC FAILURES IN EMERGENCY DEPARTMENT PATIENTS. 
A NATIONAL UNIVERSITY HOSPITAL EXPERIENCE

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Drug therapeutic failures (DTFs) are considered as adverse drug reactions in which the expected drug effects do not occur following a prescribed pharmacological treatment, including any clinical event related to lack of compliance. DTFs are responsible for increasing disease length, hospitalisation time and social costs, with a worsening of patient quality of life. The aims of the present study are: 1) to evaluate the frequency of DTFs among patients admitted to an emergency department; 2) to identify drug classes implicated in DTFs; 3) to analyse the putative causes underlying DTFs. Patients admitted to the Emergency Unit of University Hospital of Pisa, throughout two periods of 10 days each, were interviewed to gain information on their medical status and drug intake during the last two weeks. Cases of adverse drug events were classified as adverse drug reactions on the basis of a standard algorithm. Patients with adverse drug reactions had to satisfy at least 4 of 6 criteria, previously proposed by Hallas et al. [1], to be defined as cases of DTFs. Among 607 admissions, 41 cases of DTFs (19:22 male:female ratio; age range: 17-98 years; median age: 75 years) were identified, resulting in a frequency of 6.75%. DTFs showed a gaussian distribution ($P<0.05$) into classes of age and were recorded more frequently in patients older than 65 years (63.4%). Among the 41 cases of DTFs, 13 patients were subjected to monotherapy, 9 were treated with 2 drugs, 7 with 3 drugs, and 12 with more than 3 drugs. DTFs were mostly related to treatments with cardiovascular drugs (72.2%), antibiotics (7.2%), psychotropic drugs (6.3%), or antidiabetic drugs (5.1%), and could be mainly ascribed to a poor adherence to treatment schedules (80%). These results suggest that DTFs represent an important cause of emergency department admission, mainly due to a low compliance to prescribed treatments, particularly in older patients. A variety of additional factors, including pharmacological interactions and genetic variability, may be proposed to account for the occurrence of DTFs.


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