

## ADVERSE DRUG REACTIONS IN EMERGENCY DEPARTMENTS: A PROSPECTIVE 1-YEAR CHARACTERIZATION IN SICILY

1)Mocciaro E. 2)Lo giudice I. 3)Giardina C. 4)Santangelo A. 5)Spina E. 6)Arcoraci V. 7)Cutroneo PM.

*University Hospital Gaetano Martino*

**Background:** Adverse drug reactions (ADRs) are a significant public health problem since they often cause morbidity and mortality. Moreover, ADRs are an important cause of emergency department (ED) visits and hospital admissions, impacting on healthcare resource utilisation. Spontaneous reporting systems are limited by under-reporting and they lack in detecting the frequency of ADRs; active monitoring projects may be useful in this regard.

The aim of this study was to describe the frequency of ADRs reported in emergency departments (EDs) in Sicily and to carry out a characterization of them.

**Methods:** A multicentre observational study was conducted in 4 Sicilian EDs. Demographic and pharmacological data on patients admitted to EDs, due to ADRs, were collected by two trained and qualified monitors for each ED. The ADRs were classified according to MedDRA dictionary and analyzed by System Organ Class (SOC) and preferred term (PT). Drugs were classified according to ATC classification. Absolute and percentage frequencies of ADRs with 95% CI were evaluated.

**Results:** ADRs were identified in 595 patients admitted to EDs. Among these, 169 (28.4%) reported a serious event. Mean age ( $\pm$ SD) of patients with ADR was  $51\pm 19.8$  years and the majority of them were females (63.2% vs 36.8%). The average number of drugs for patients that experienced at least an ADR was  $2.2\pm 2.1$ . A total of 831 single ADRs were identified.

The most common implicated drug classes in ED visits due to ADRs were antibacterials for systemic use (45.7%) and antiinflammatory and antirheumatic agents (31.3%). The same classes of drugs were mostly related to clinically significant adverse events, such as moderate to severe allergic reactions. Amoxicillin/clavulanate (13.2%), ketoprofen (10.8%), ceftriaxone (6.4%), amoxicillin (4.5%) and acetylsalicylic acid (4.1%) were the most commonly involved drugs. Antibiotics and psycholeptics caused respectively 39.6% and 30.2% of serious ADRs. The SOCs most frequently associated with ADRs were: skin and subcutaneous tissue disorders (40.9%), gastrointestinal disorders (10.1%), general and administration site conditions (8.9%), and respiratory disorders (8.9%).

**Conclusion:** ADRs are common causes of emergency department visits. The commonly used antibiotics or antiinflammatory drugs should be carefully managed, as they result widely involved in moderate or severe ADRs. Strategies to improve safe medication use are essential.