PHARMACEUTICAL INTERVENTIONS IN THE EMERGENCY DEPARTMENT: RELEVANCE IN HIGH-ALERT MEDICATIONS

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BACKGROUND

• The Institute for Safe Medication Practices (ISMP) defines high-alert medications (HAM) as drugs that bear a heightened risk of causing significant patient harm when used in error. Medication errors are frequent in the hospital Emergency Department (ED), and the most common drugs involved in these errors are HAM.

PURPOSE

• To assess the potential impact of the pharmaceutical interventions (PIs) on HAM in patients at ED observation unit (EDOU).

MATERIAL AND METHODS

• Prospective observational study, conducted from July to September of 2017 in the EDOU of a referral hospital.
• The pharmacist performed clinical activity in the ED from Monday to Friday in the morning.
• Variables included in the analysis were:
  ✓ Gender
  ✓ Age
  ✓ Admission diagnosis classified with International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM)
  ✓ Number and type of PIs
  ✓ Value of potential impact of PIs (Overhage et al.⁴)
  ✓ Classification of ISMP list of HAM.
• Analysis was performed using SPSS Statistics IBP-19 version.

RESULTS

• 579 patients were in the EDOU during the working hours of the pharmacist, who intervened in 120 patients (20.7%).
• 52.5% were men and mean age was 70.84±15.5 years.
• The most frequent admission diagnosis in patients with PIs were:
  ✓ Chest pain 11.7%
  ✓ Acute respiratory failure 7.5%
  ✓ Intermediate coronary syndrome 6.7%
  ✓ Urinary tract infection 3.3%
  ✓ Congestive heart failure 3.3%
  ✓ Sepsis 2.5%
  ✓ Hyposmolality and/or hiponatremia 2.5%
  ✓ Hemorrhage of gastrointestinal tract 2.5%.
• 237 PIs were performed (1.97±1.6 per patient).
  • 71.3% of PIs had a potential impact on patient care, and 37.6% were made on HAM.
  • The relevance of PIs in HAM was higher than in the rest of medication, being statistically significant (p<0.001).

CONCLUSIONS

• Pharmacists at the ED had a positive impact on the medication process, improving safety and effectiveness of prescriptions, and minimising the risk to the patient, especially with HAM.