

Introduction:

Medication errors are a major global public health problem that requires a very important approach and collaborative work between physicians, pharmacists and nurses. Pharmaceutical interventions (PI) are an effective way to fight drug iatrogeny [1].

AIM:

The objective of the study was to analyze pharmaceutical interventions and their impact on patients hospitalized in a medical emergency department

Materiels :

This is a retrospective study conducted in a medical emergency department of Ibn Sina Hospital in Morocco during a 6-month period, between February and August 2019. Prescriptions were analyzed and validated according to the methodology of the French Society of Clinical Pharmacy (SFPC). The collected data were analyzed and classified by a PI sheet developed by the SFPC. The relevance of PIs was assessed by their acceptance rate by prescribers and their clinical impact was evaluated according to the Hatoum scale.

Results:

A total of 158 PIs were recorded over six months. Among these PIs, 98% were accepted by the prescriber. The sex ratio (Men/Females) was 1.35 in favor of a male predominance. The average age of our patients was 56.06 ±15.81 years. 86 PIs (55%) concerned an antibiotic. The main prescription problems were overdose (29%), inappropriate routes of administration (22%), untreated indications (10%) and contraindications (6%). Our interventions concern dosage adjustment (32.27%), optimization of administration modalities (22.15%), drug discontinuation (14.5%), and addition of new prescription (11.39%).

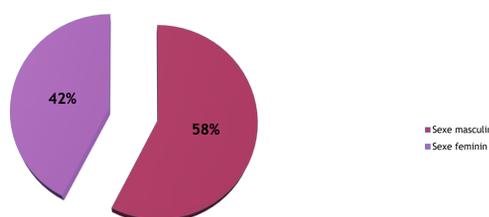


Figure1 : Sex distribution

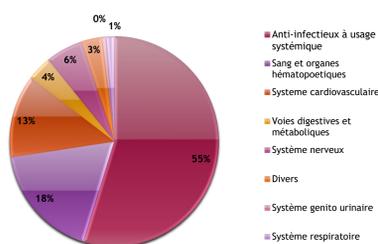


Figure2: the drug concerned

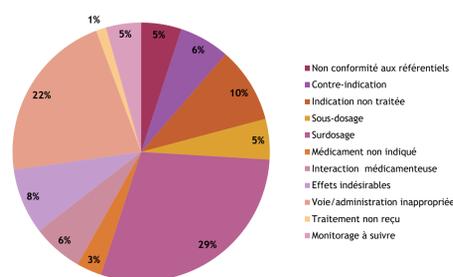


Figure3 : Problems detected

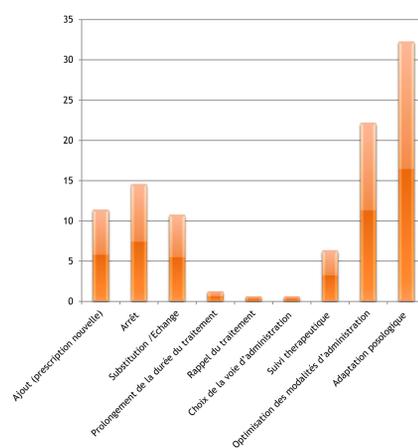


Figure4: Pharmaceutical interventions

Discussion:

Anti-infectives are the most described drug family in the PIs (55%) during the study period. This is explained by the nature of the service, where infections are very frequent (Meningitis, sepsis, infectious endocarditis...)

This is in contrast to the observations made by Clementz et al [2].

Overdosage was found in the majority of cases in our study (29%), highlighting the lack of time for doctors to check the renal clearance of patients and to adapt the dosage.

Inappropriate routes of administration were the second most frequent problem (22%), which is explained by the lack of training of nurses.

On the other hand, we note in our work, a rather low rate of treatments not received (1%), which was a concomitant administration of two incompatible antibiotics in Y (Imipenem and Vancomycin).

We find similarities between our work and two other studies on the category of pharmaceutical interventions which allow us to say that dosage adjustment is a very frequent intervention (32.27%), in the study of Abdelaziz et al it was 19.3%[3], and 18% according to the study of Nielson et al [4].

The acceptance rate by the physicians was 98% with a good integration of the pharmaceutical team in the service. This rate was also observed in the other studies [4].

Conclusion:

This study highlights the importance of the clinical pharmacist in the fight against drug iatrogeny.

The high frequency of these medication errors could be reduced by a very important collaborative approach and work between physicians, pharmacists and nurses.

Références bibliographiques:

- [1] Hedira et al. Evaluation de l'activité de pharmacie clinique dans un centre hospitalier mère-enfant en Tunisie - 53- Le Pharmacien Hospitalier et Clinicien. 2018
 [2] A. Clementz et al. Mise en place et évaluation de validations d'ordonnances et d'interventions pharmaceutiques dans un service d'urgences adultes. Le Pharmacien Hospitalier et Clinicien, Volume 52, June 2017, e47-e53
 [3] Abdelaziz H et al. Impact of clinical pharmacy services in a short stay unit of a hospital emergency department in Qatar. Int J Clin Pharm 2016;38:776-9
 [4] Nielsen T et al. Clinical pharmacist service in the acute ward. Int J Clin Pharm 2013;35:1137-51.