FOUR YEARS OF A PHARMACEUTICAL CARE PROGRAMME IN PATIENTS UNDERGOING CARDIAC SURGERY

Cavada Carranza I, García González X, Ibáñez García S, Gómez Costas D, Herranz Alonso A, Sanjurjo Saez M.
Servicio de Farmacia. Hospital General Universitario Gregorio Marañón. Madrid, Spain

BACKGROUND AND IMPORTANCE

Preoperative setting: high risk for medication errors with potentially severe consequences.

Pharmaceutical care programmes (PCP):
- Achieve an adequate preoperative pharmacological management.
- Reach surgery in optimal pharmacological conditions.

AIM AND OBJECTIVE

To evaluate the impact of a PCP in patients undergoing cardiac surgery in preventing medication errors after 4 years of implementation.

MATERIALS AND METHODS

Design:
- Retrospective, observational study
- July 2018 - July 2022
- All patients scheduled for cardiac surgery

1. 24-72h before the surgery: Telephonic pharmacists’ clinical interviews
   - Patients’ complete medication list (over the counter medicines and herbal products)
   - Instructions for adequate preoperative medication management were reinforced.

2. Avoided medication errors categorization:
   - Overhage-classification and their severity was analysed according to NCC-MERP

3. Savings:
   - Multiplying the probability of adverse event occurrence with the error (NCC-MERP≥F: high risk of admission or prolonged hospital stay) by avoided cost (6.745€ according to Ministry of Health, Consumer and Social Welfare).

RESULTS

- 1020 pharmacist preoperative interviews
- Mean age was 66.8 (sd:12.6) years
- 65.8% were males

41.8%

- At least one drug that needed to be discontinued before surgery
  - 23.6% Angiotensin-converting enzyme inhibitors, angiotensin-II receptors blockers and diuretics
  - 22.2% Anticoagulants and antiplatelet treatment
  - 11.4% Hypoglycemic treatment

43.5% of patients needed heparin bridge therapy

Graph 1: Pharmacy interventions
- Discontinue drugs before surgery: 8.6%
- Dose error: 4.2%
- Drug omission: 6.4%
- Wrong duration, frequency or indication: 10.7%
- Others: 70.1%

Graph 2: Severity of medication errors
- Permanent harm (G/H): 35.2%
- Temporary harm (E/F): 41.1%
- Monitoring to confirm no harm (D): 5.7%

Potential medication errors avoided an estimated cost of 992.130€

Take home

- 807 pharmacy interventions were conducted with 94.2% of acceptance rate
- 673 serious errors were avoided
- Significant cost savings by avoiding medication errors

CONCLUSION AND RELEVANCE

A PCP in patients undergoing cardiac surgery was successfully implemented, ensuring a correct preoperative drug management, with 0.8 severe medication errors avoided per patient that was interviewed and potential savings of 992.130€.

irene.cavada@salud.madrid.org  @farma_gregorio  www.madrid.org/hospitalgregoriomaranon/farmacia