

Quality of the preoperative medication history for the patients scheduled for total hip replacement or total knee replacement at the CHU of Liege (QAMP-STUDY). C. STAQUET¹, A. BUSUMBIGABO², B. REMY¹, T. VAN HEES², J.F. BRICHANT^{1}. ¹Dpt. of Anesthesia and ICM, ²Dpt. of Clinical Pharmacy, CHU of Liège, University of Liège, Belgium.*

Introduction

Up to 27% of all hospital prescribing errors are related to inaccurate medication history obtained upon admission. Medication reconciliation is an important part of medication safety and a subject of growing interest. Few data are available about medication reconciliation at the preoperative visit for total hip replacement (THR) or total knee replacement (TKR). The objective of this study was to identify major errors existing in the preoperative medication history with the aim to recommend a new standardized way to obtain a comprehensive medication history for surgical patients at the preoperative visit.

Materials and Methods

The CHU of Liège is a teaching hospital of 925 beds. About 225 THR and TKR are performed each year. All patients are seen preoperatively by an anaesthesiologist. During this visit, the anaesthesiologist carries out a medication history. In a blinded prospective study conducted from December 2012 to June 2013, all elective THR or TKR patients were interviewed by a clinical pharmacist postoperatively. Patients were identified from the daily surgical list. The medication histories were collected by the clinical pharmacist using a standardized form and compared with the medication information obtained by the anaesthesiologist during the preoperative visit, reported in the medical record. The clinical importance of these discrepancies was evaluated as : level 0 : identified drug for which information on dose or treatment schedule is not important 38.7%, level 1 : discrepancy that doesn't have any influence on perioperative management 40.3%, level 2 : discrepancy that can cause minor harm to patient 18.1%, level 3 : discrepancy that can cause moderate harm to patient 2.7% and level 4 : discrepancy that can cause severe or life threatening harm to patient 0.2%. These clinical relevance of the discrepancies were evaluated by anaesthesiologists after the data collection period. Discrepancies between anaesthesiologist medication history record and the pharmacist were classified according to their type, origin, drugs and clinical importance.

Results

With the approach of the local ethics committee and informed consent of the patient, 105 patients (60% of women, 57% of THR, with a mean age of 64 years) were enrolled in the study. The average number of drugs per patient reported by the anaesthesiologist was 5.8 ± 3.9 (mean \pm SD), and the average number of drugs self-re-

Table 1

Top 10 most frequent discrepant drug

ATC Code	Drug's name (INN)	Total nb
CAM products	Phytotherapy, homeopathic and dietary supplement products	60
N02BE01	Paracetamol	58
A11CC05	Colecalciferol	40
M01AE01	Ibuprofen	13
N02AX02	Tramadol	11
B01AC06	Acetylsalicylic acid	10
N02AX52	Tramadol, combinations (Zaldiar)	10
N05CF02	Zolpidem	10
H03AA01	Levothyroxine sodium	9
M02AA15	Diclofenac	8
Total		229
% (n = 486)		47.1

ported by the patient to the pharmacist was 5.5 ± 3.8 , increasing to 8.7 ± 4.5 by using specific questions or by contacting the patient's community pharmacist. Information in the medical chart was incomplete for 486 drugs (53.5%). The discrepancies were : drug omission 61.9%, treatment schedule omission 13.8%, dose omission 10.3%, treatment schedule and dose omission 15.0%. Omitted drugs were mainly complementary and alternative medicine products, analgesics and osteoporosis treatments, drugs for obstructive airway diseases, drugs for acids-related disorders, and cardiovascular system drugs (Table 1).

Conclusion

There were several errors in the medication history recorded preoperatively. This confirms the importance of improving the procedure for obtaining medication history. Education of anaesthesiologists, use of dedicated forms, collection of information from community pharmacists, active participation of a clinical pharmacist in the preoperative consultations or patient empowerment are suggested identified as possible ways of improvement.

References

1. Tam V. C., *et al.*, CMAJ : CANADIAN MEDICAL ASSOCIATION JOURNAL = JOURNAL DE L'ASSOCIATION MEDICALE CANADIENNE, **173**, 510-515, 2005.
2. De Hert S., *et al.*, EUROPEAN JOURNAL OF ANAESTHESIOLOGY, **28**, 684-722, 2011.
3. Whinney C., CLEVELAND CLINIC JOURNAL OF MEDICINE, **76 Suppl 4**, S126-132, 2009.