months), who were given oral chloral hydrate, 50 mg/kg, for sedation before MRI. The study was limited to children who weighed 25 kg or less. Sedation was considered successful when MRI studies were completed and at least 95% of the images had few or no motion artifacts.

Results The overall length of time to achieve sedation ranged from 8 to 30 min (13.5±11.33 min); the overall mean duration of sedation ranged from 10 to 45 min (29.5±5.02 min); and the overall mean length of time to return to normal activity was 30 min to 3 hour (47.3±16.2 min). Other studies reported that chloral hydrate was more effective than midazolam in facilitating the completion of painless imaging studies, although it has a longer onset and duration, and reported minimal adverse events (the only side effect observed was vomiting in 15% of children).[1 2] On the pharmaco-economic side, the hospital preparation of the CHS 5% in a bottle of 100 ml costs € 1.85. The direct cost to prepare the sedation is € 0.37 for each child of 20 kg versus € 1.24 for sedation of the child with the same weight by Midazolam.

Conclusion The low adverse events for CHS, and the much lower cost of its use to induce sedation for a short time has made CHS our preference for sedation in infants and children undergoing MRI in our hospital.

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No conflict of interest.

4CPS-167 STUDY OF THE USE OF TAPENTADOL

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Background Tapentadol is a potent analgesic with opioid agonist properties of the μ receptor and additional properties of inhibition of norepinephrine recapture. It is indicated to control chronic intense pain in adults, which can only be treated adequately with an opioid analgesic.

Purpose To analyse and evaluate the use of tapentadol in a second-level hospital and describe the characteristics of patients who have been treated.

Material and methods Observational, descriptive study. All episodes of treatment with tapentadol in the hospital since 1 January 2017 (date of its introduction in the pharmacotherapeutic guide) until 1 October 2018 were included. Patient variables (sex, age, dose, indication and service in which they were admitted) were retrieved from the electronic medical records (Diraya) and all data related to tapentadol posologies (dosage and frequency) were reviewed through the prescriptions of patients using Silicon, the electronic prescribing system. All data obtained were included in a database designed for this study.

Results During the period of our study 50 patients were treated, 44% males with an average age of 66.9 (44–86) years and 56% females whose average age was 66.7 (29–87) years. The most prescribed dose was 50 mg/12 hours (60%), followed by 100 mg/12 hours (28%), 200 mg/12 hours (6%), 150 mg/12 hours (4%) and finally 25 mg/12 hours (2%).

Regarding the prescription of tapentadol in terms of pathologies, it was emphasised that 52% of patients suffered herniated discs and/or vertebral fractures, 30% chronic pain, generalised polyarthritis and fibromyalgia, 10% cancer pain, 6% chronic tension headaches and/or migraines, while only 2% suffered from advanced Parkinson's disease.

The medical services that made these prescriptions were: 44% internal medicine, 38% orthopaedic surgery and traumatology, 12% neurology, 4% urology and 2% palliative care.

Conclusion The use of tapentadol is more frequent in females than in males. Respecting ages, they are very similar in both sexes.

The highest doses belong to patients with oncological pain.

The prescription of tapentadol was mainly for non-oncological pain (90%) and, within it, the pathologies mainly treated were spinal injuries (herniated discs and/or vertebral fractures).

Orthopaedic surgery, traumatology and internal medicine were the main prescribers.

REFERENCES AND/OR ACKNOWLEDGEMENTS

No conflict of interest.

4CPS-168 POSTOPERATIVE PAIN MANAGEMENT AND PAIN REFERRED BY ADULT PATIENTS 24 HOURS AFTER SURGERY AND ONE MONTH AFTER DISCHARGE

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Background Inappropriate pain management during the surgical process could lead to worse surgery outcomes and quality of life. Hospital pharmacists should develop strategies to improve pain management.

Purpose To describe postoperative pain treatment, the proportion of patients who referred moderate-severe pain 24 hours after surgery and 1 month after discharge, and number of visits to the primary care physician, the emergency room (ER) or re-admissions related to postoperative pain during the first month after surgery.

Material and methods An observational, descriptive, prospective study was conducted from February to September 2018. Inclusion criteria: adult patients admitted to surgery departments 24 hours after surgery. Collected variables: demographic, pharmacotherapeutic and clinical. The intensity of the pain was measured by the numerical verbal scale (NVS). The frequency of patients with moderate-severe pain (NVS ≥4) was calculated at 24 hours after intervention and 30 days after discharge.

Results

- One–hundred and thirty–three patients (59% males) were recruited (median age 62.7 years, interquartile range 52.0–72.3).
- One–hundred and seventeen patients (88.0%, CI 95%: 82.4% to 93.5%) were prescribed an analgesic around–the–clock.
- Ninety–eight patients (73.7%, CI 95%: 66.2% to 81.2%) were prescribed acetaminophen, dipyrone or a NSAID around–the–clock. Thirty–eight of them (38.8%,CI 95%:29.1% to 48.4%) were prescribed a potent opioid as a rescue, whereas 28 of them (28.6%, CI 95%: 19.6% to

37.5%) were prescribed a weak opioid and seven (7.1%, CI 95%: 2.0% to 12.2%) were prescribed another non–opioid drug.
- Thirty–two patients (24.1%, CI 95%: 16.8% to 31.3%) were not prescribed any drug as a rescue.
- Eighty–five patients (63.9% CI 95%: 55.7% to 72.1%) reported moderate–severe pain within 24 hours after surgery. Only 30 of them (35.3%, CI 95%: 25.1% to 45.5%) were administered one or more rescues within the 24 hours after surgery.
- At discharge, 34 patients (25.6%, CI 95%: 18.2% to 33.0%) were prescribed one or more analgesics around–the–clock.
- Thirty–one patients (23.3%, CI 95%: 16.1% to 30.5%) reported moderate–severe pain within 30 days after discharge.
- Eight patients (6.0%, CI 95%: 2.0% to 10.1%) attended the primary care physician consultation due to postoperative pain during the first month after discharge, while two (1.5%, CI 95%: 0.6% to 3,6%) went to the ER and/or were readmitted for this reason.

Conclusion Most patients were prescribed a NSAID, acetaminophen or dipyrone around-the-clock and a strong opioid as a rescue if more pain was experienced.

Rescue medication was under-prescribed and under-administered, which may partially explain the insufficient pain control within the first month after surgery.

REFERENCES AND/OR ACKNOWLEDGEMENTS

No conflict of interest.

4CPS-169 COMPARATIVE ANALYSIS OF EFFECTIVENESS BETWEEN A PATIENT-CONTROLLED ANALGESIA MORPHINE DEVICE AND A SUBLINGUAL SUFENTANIL TABLET SYSTEM

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Background The sublingual sufentanil tablet system (SSTS) (Zalviso) is a new device for the management of postoperative pain.

Purpose To determine patients who may benefit from the use of SSTS compared to the patient-controlled analgesia morphine device (PCA-M). Analyse the effectiveness of SSTS compared to PCA-M.

Material and methods Observational and prospective study carried out in a private 300-bed hospital. The present study consisted of two arms, on the one hand were selected patients with PCA-M and on the other, patients with SSTS. The study period was from September 2017 to March 2018. In the present study were collected the type of surgery and pain intensity with the analogous visual scale of pain (AVS:0: no pain; 10: maximum pain) in various situations: prior to the PCA-M/SSTS and on days 1, 2 and 3 after PCA-M/SSTS. The total AVS value (average of 3 days) of each patient was also determined. The AVS value was determined through a pharmaceutical interview. Study data were analysed with the SPSS program: the difference of means was calculated through the student *t*-test and the Mann–Whitney U test.

Results Fifty-one patients were collected in the PCA-M group and forty-four in the SSTS group. The average age in the PCA-M group was 55 years, while the average age in the SSTS group was 50 years, with no significant differences between groups. Patients differed significantly between groups in the type of surgery: SSTS has been used more frequently in gynaecological surgery but less in neurosurgery than PCA-M. Groups also differed significantly in gender: SSTS has been administered mostly in females (65%) versus PCA-M (37%). The intensity of the pain prior to the use of the device was AVS 7 for both groups. On the first day after the device was used, the average AVS value in the SSTS group was 5 and in the PCA-M group 6 (P0.24). On days 2 and 3 the intensity of pain was lower in the PCA-M group (AVS 3) compared with the SSTS group (AVS 4) (P0.58). Sum of the AVS average value was 15 in the PCA-M group and 14 in the SSTS group (P0.28).

Conclusion According to the present study, both devices have similar effects in the reduction and management of post-operative pain through the AVS scale. The SSTS group slightly decreases pain faster than the PCA-M group, without significant differences. SSTS has been administered mainly in gynaecology, while the PCA-M device has been administered mainly in neurosurgery.

REFERENCES AND/OR ACKNOWLEDGEMENTS

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No conflict of interest.

4CPS-170 ESTIMATING THE ECONOMIC IMPACT OF PHARMACIST-LED PRESCRIPTION ORDER VALIDATION OF OPIOID PRESCRIPTIONS IN A TERTIARY UNIVERSITY HOSPITAL

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Background Opioids easily cause adverse drug events (ADEs) or therapeutic failure in cases of prescribing errors, resulting in increased costs for the hospital, patient and healthcare system. The clinical pharmacist can detect and resolve these errors by performing prescription order validation (POV). Little data is available on the economic impact of this service.

Purpose To evaluate the cost-outcome of pharmacist-initiated interventions on opioid prescriptions during POV, in terms of cost savings and cost avoidance (CA) for the institution.

Material and methods Pharmacist interventions in prescriptions of fentanyl, hydromorphone, methadone, morphine, oxycodone and piritramide in a Belgian tertiary university hospital of 721 beds, UZ Brussel, were analysed (period 1 February 2017–31 January 2018). The potential drug cost without intervention was compared to the cost with intervention. An expert panel assessed the probability of ADE occurrence by assigning a probability estimate (PE) to every patient (0–no effect; 0.01–very low; 0.1–low; 0.4–medium; 0.6–high). The ADE-CA was calculated by multiplying the hospital's cost of an ADE (calculated according to a method proposed by the Belgian Healthcare Knowledge Centre) by