effectiveness and low cost, the need for frequent monitoring and dose adjustments has highlighted the importance of introducing into clinical practice new oral anticoagulants (NOACs) to increase safety and obtain more predictable results.

Aim and objectives The aim of the study was to determine dose adequacy of three new oral anticoagulants (apixaban, dabigatran and rivaroxaban) prescribed in clinical practice.

Material and methods An observational prospective study was conducted in a tertiary hospital over a 6 month period. All patients with a prescription for apixaban, dabigatran or rivaroxaban were eligible for the study. Demographic (age, gender, medical history) and clinical (weight, NOAC type and dose, diagnosis and renal function calculated with the MKP-EPI form) data were recorded in a chart, and dose adequacy was assessed and reviewed by two different investigators. The results were analysed using a multivariable logistic regression technique with a 95% significance level.

Results After excluding 3 patients due to incomplete data, 138 patients, 56% men, were recruited. From these, 40% of the patients were prescribed apixaban, 25% dabigatran and 34% rivaroxaban. The statistical analysis adjusted by sex and age showed that the risk of inadequacy was significant when using apixaban ($p<0.001$, OR 8.4) and dabigatran ($p<0.006$, OR 7.0). This could be explained by the fact that the most prevalent diagnosis was auricular fibrillation. In this indication, rivaroxaban is adjusted by creatinine clearance while apixaban is adjusted by weight, age and clearance, and dabigatran by age, concomitant treatment with verapamil and clearance. Lower doses were significantly inadequate compared with higher doses (apixaban 2.5 mg/12 hours ($p<0.000$), dabigatran 110 mg/12 hours ($p<0.002$) and rivaroxaban 15 mg/12 hours ($p<0.036$)). Rivaroxaban was the nearest to an adequate prescription.

Conclusion and relevance In conclusion, it seems that at least for auricular fibrillation, rivaroxaban constitutes the agent with the best adequacy, probably due to its simpler adjustment. Furthermore, with the three drugs, lower doses tended to be less adequate than higher doses, which raises the question of whether patients are under dosed. More training is needed to correctly prescribe this group of drugs.

REFERENCES AND/OR ACKNOWLEDGEMENTS

Conflict of interest No conflict of interest

5PSQ-128 WHICH ENOXAPARIN PREVENTIVE DOSAGE TO CHOOSE FOR OBESE PATIENTS IN ORTHOPAEDIC SURGERY?

L Mariette-Laban*, J Jouglen, A Quenardel. *Chu Purpan Toulouse, Pharmacie, Toulouse, France*

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Background and importance In our orthopaedic surgery centre, prescribers seem to use different dosages of enoxaparin for the prevention of the thromboembolic risk for obese patients. Systematically, the dosage is adapted to renal function, but there are no guidelines for obese patients.

Aim and objectives The aim was to analyse the prescribing practices to create an internal protocol.

Material and methods This was a retrospective study from 1 January 2020 to 28 February 2020 of every enoxaparin prescription for a preventive dosage in orthopaedic surgery. We compared enoxaparin's dosage with different criteria: sex, age, weight, body mass index (BMI), glomerular filtration flow, surgical and medical history, chronic treatment, surgical indication and prescribers.

Results We included 517 patients (table 1).

Abstract 5PSQ-128 Table 1

Enoxaparin dose/day	No (%) of patients	Median BMI (kg/m²)	Median weight (kg)
2000 IU	20 (4)	20.5	50
4000 IU	462 (89)	24.7	71
6000 IU	21 (4)	31.3	90
8000 IU	14 (3)	37.5	110

Every patient with a dosage higher than 4000 IU (35/517) weighed >80 kg. Among them, 7 patients (19.4%) had a BMI >40 kg/m². These patients received 4000 IU of enoxaparin twice a day or 6000 IU in one administration. 20 of 517 patients were of low weight (<45 kg for women and <57 kg for men), and among them 6 (30%) received <4000 IU/day. Apart from renal function, no other criteria influenced the dose of enoxaparin. There was a disparity in dosages between prescribers. Of 19 prescribers, 7 (36.8%) occasionally, and 1 systematically, increased the dose of enoxaparin for weights >80 kg and BMI <40 kg/m². No thrombosis or haemorrhage occurred for dosages >4000 IU/day.

Conclusion and relevance European studies are based only on BMI or weight: increased dosage of enoxaparin for BMI higher than 40 kg/m² and more or less weight higher than 100 kg. The heterogeneity of prescriptions between prescribers and by prescribers highlights the lack of consensus. Adapting the dosage for a weight >80 kg does not seem appropriate because it includes non-obese patients with an increased risk of bleeding. Work in tandem with anaesthesiologists is underway to harmonise practices in our centre.

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Conflict of interest No conflict of interest

5PSQ-129 MANAGEMENT OF MULTIFACTORIAL ANAEMIA WITH SUBCUTANEOUS DARBEPOETIN WITH INITIAL MONTHLY DOSAGE, OMITTING INDUCTION ACCORDING TO THE TECHNICAL DATA SHEET, IN ELDERLY PATIENTS

[1]L Villalobos Torres*, [2]M Gonzalez Padilla, [3]JC Del Rio Valencia. *[1]Hospital Alto Guadalquivir De Andújar, UGC Farmacia Hospitalaria, Jaén, Spain; [2]Hospital Clínico Universitario Virgen De La Victoria, Servicio De Farmacia Hospitalaria, Málaga, Spain; [3]Hospital Regional Universitario De Málaga, Farmacia Hospitalaria, Málaga, Spain*

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Background and importance Multifactorial anaemia is a common disease in elderly patients, usually treated with darbepoetin in different dosages.

Aim and objectives To maintain normal haemoglobin (Hb) values (>12 g/dL in women and >13 g/dL in men according to

the WHO) in multifactorial anaemic patients older than 75 years, using high doses of darbepoetin with initial monthly dosage, eliminating weekly/fortnightly induction, facilitating treatment.

Material and methods A retrospective, multicentre, observational study was conducted in patients who started treatment with monthly doses of darbepoetin in the last 3 years (1 April 2017 to 1 April 2020), without previous induction doses. The first follow-up visit was made 1 month after the first dose was administered or just after the second dose, testing that Hb was maintained >12–13 g/dL. If the tests showed higher results, doses were lowered (20–25%); if the tests showed lower results, the dose was increased. The procedure was repeated the following month only in patients not in the range. In these cases, after two checks of stability, the test became quarterly. Variables measured were dosage, and initial, monthly and quarterly Hb values. Patients with insufficient information, or younger than 75 years, were excluded (because of different optimal values). Data were obtained from the hospital's clinical information systems. Patients were informed if they required a different dosage than usual, giving their consent.

Results 36 patients initiated darbepoetin monthly during the study (7 men, 29 women). Median age was 86 years. Six patients were excluded, one for age, and five for not having sufficient data. Dosage by prescribers was 1.5 µg/kg/month. Average Hb starting treatment was 9.76 g/dL (range 7.6–10.5) and in the first control (4–8 weeks) it was 11.11 g/dL (range 8.8–13.6). In 70% (21/30) of patients, it was not necessary to change the initial dose because therapeutic objectives were progressively achieved. This dose was maintained until the successive quarterly controls. In the other 30% (9/30), 4 had their dose increased and 5 had their dose decreased to keep within range. In successive quarterly controls, the average value was 12.62 g/dL (10.5–15.3), achieving the therapeutic goals in all but two patients. Two patients were transfused due to acute processes that could alter the results.

Conclusion and relevance The monthly starting dosage in elderly patients appeared an effective and safe way to achieve therapeutic goals in multifactorial anaemia. The advantage over weekly/biweekly induction lies in better therapeutic adherence, reducing the number of doses needed in patients who also have many other medications.

REFERENCES AND/OR ACKNOWLEDGEMENTS

Conflict of interest No conflict of interest

5PSQ-130 INTRAVENOUS POTASSIUM CHLORIDE: IS THE MEDICATION USE PROCESS SECURE?

F Charbonneau*, AC Desbuquois, AM Liebbe, M Boisgontier. *Compiegne-Noyon Hospital Centre, Pharmacy Unit, Compiegne, France*

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Background and importance Potassium chloride (KCl) for injection is identified as a high risk medicine and a 'never events'. The development of quality assurance strategies for the KCl use process is essential to minimise risk.

Aim and objectives To assess compliance with guidelines for KCl prescription, pharmaceutical evaluation and administration for KCl use to identify priorities for improvement.

Material and methods A prospective observational study was conducted including patients treated with intravenous KCl (outside the intensive care unit) over 4 non-consecutive days from February to March 2020. The KCl use guidelines of the French National Agency for Medicines and Products Safety was considered as a reference. Data collected were: for the prescribing stage: indication, information that must appear on the prescription, concentration and flow rate; for the pharmaceutical evaluation stage: entry of pharmaceutical intervention (PI) for a non-compliant prescription; and for the administration stage: labelling, administered concentration and flow rate. Data were collected from the electronic medical records and the observation of KCl administration.

Results During the study period, 34 patients (53% men) were included, with a median age of 76 years (range 26–94). The KCl use process was compliant for 6% (2/34). The prescribing stage was non-compliant (NC) for 88% (30/34): 76% (26/34) with NC indication, 53% (18/34) with incomplete prescription and 12% (4/34) too concentrated. The pharmaceutical evaluation stage was NC for 83% (25/30): it was missing in 58% (15/26) of non-indication PI, 89% (16/18) of missed information PI and 75% (3/4) of NC concentration PI. The administration stage was NC for 68% (23/34): 53% (18/34) with incomplete labelling and 15% (5/34) too concentrated. The flow rate was 100% compliant.

Conclusion and relevance This study highlights a lack of compliance with recommendations. Because of this audit, we have identified an action plan for improvement: raising awareness of KCl good practices among physicians, pharmacists and nurses; identification of high risk medicines by a specific logo on software; and setting up intravenous KCl prescription protocols and an automatic reassessment request after 2 days. For pharmacists, it will be necessary to set up a simulation for pharmaceutical evaluation on fictional cases. For nurses, the labelling rules should be recalled.

REFERENCES AND/OR ACKNOWLEDGEMENTS

Conflict of interest No conflict of interest

5PSQ-131 ADHERENCE OF THE HOSPITAL CLINICAL MANAGEMENT UNITS TO THE CENTRE'S PROTOCOL FOR THE SAFE USE OF INTRAVENOUS POTASSIUM

B Fernández Rubio*, H Acosta García, M Ladrón De Guevera García, M Alonso Moreno. *Hospital Universitario Virgen Del Rocío, Farmacia, Sevilla, Spain*

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Background and importance Following the recommendations of the Spanish Delegation from the Institute for Safe Medication Practices (ISMP), the safety commission of our hospital developed a programme to promote the safe use of intravenous potassium between 2012 and 2015. An audit carried out found that consumption from concentrated solutions (CS) was 10 times higher than from prediluted solutions (PS). A protocol was circulated to the service areas (SA) through institutional messages and training sessions. As a consequence, the amount of potassium consumed from PS was 3.7 times higher than from CS.

Aim and objectives In 2019, the International Medication Safety Network (IMSN) included the use of intravenous potassium as one of the main measures to avoid serious medication errors. The objective was to determine the degree of