dabigatran and rivaroxaban are third-line options.^{1 2} In 2014, warfarin was prescribed in 81% of cases in the MMUH. National data indicate DOACs are now prescribed more often than warfarin.²

Aim and objectives To identify current MMUH OAC prescribing practice and compare results with 2014 data.

Material and methods A point prevalence audit was completed in November 2018 by clinical pharmacists, across 30 wards on all patients receiving OACs. The OAC, indication, dose, prescribing team speciality and if treatment was commenced on this MMUH admission were recorded. Results were collated, analysed and compared with an identical 2014 audit.

Results More MMUH patients were prescribed OACs in 2018 (n=87) than in 2014 (n=53) (p<0.01). Apixaban was the most commonly prescribed OAC (48%), followed by rivaroxaban (20%), warfarin (16%), dabigatran (14%) and edoxaban (2%). In 2014, warfarin was the most commonly prescribed OAC (81%), followed by rivaroxaban (15%), apixaban (2%) and dabigatran (2%). DOAC prescribing was mainly for licensed indications and doses.

Medicines for the elderly speciality had the most patients on OACs in both 2018 (n=29) and 2014 (n=14). The majority of patients prescribed OACs in both 2014 and 2018 were aged 60 years or over. In 2014, all patients <60 years of age requiring oral anticoagulation were on warfarin. In 2018, all these patients were on DOACs. The number of patients starting OACs during MMUH admission was almost 10% higher in 2018 (n=27) than in 2014 (n=11) (p=0.18).

Conclusion and relevance Apixaban was the most commonly prescribed OAC in the MMUH. Use of warfarin has decreased from 81% in 2014 to 16% in 2018 and is now surpassed by DOAC prescribing (p<0.01). Increased OAC prescribing means increased pharmacy workload in terms of medication review and patient education.

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No conflict of interest.

4CPS-013 EFFECT OF 2 MG INTRAVENOUS PHYTONADIONE TREATMENT ON INTERNATIONAL NORMALISED RATIO IN THE HOSPITALISED ADULT

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10.1136/ejhp-pharm-2020-eahpconf.114

Background and importance Phytonadione is widely used in patients with an elevated international normalised ratio (INR) in whom the goal is rapid reversal of INR to a safe range, whether in preparation for an invasive procedure or in supra-therapeutic INR due to vitamin K antagonist (VKA) treatment. Vitamin K promotes liver synthesis of clotting factors (II, VII, IX, X) by an unknown mechanism; nonetheless, it has not been clearly demonstrated that phytonadione lowers the risk of major haemorrhage. Moreover, intravenous phytonadione administration is not free of side effects such as anaphylactoid reaction, overcorrection of INR or resistance to VKAs. Lack of compliance between published guidelines is probably because of the limited data available.

Aim and objectives The aim of the study was to analyse the reversal effect of INR caused to 2 mg intravenous phytonadione treatment depending on the initial INR and to evaluate if lowering INR is directly related to the number of doses administered.

Material and methods A retrospective observational study was carried out based on data obtained from the hospital database that included all hospitalised adults treated with 2 mg intravenous phytonadione in 2019. The analysis was developed by Stata/IC-V.15 and commands *cir means*, *cir, ttest* and *twoway scatter*. The collected parameters were date of birth, sex, frequency, number of doses administered, INR values, date and hour INR values were collected and vitamin K administrations.

Results The study included 47 adults: 24 (51.1%) men and 23 (48.9%) women. Four frequencies were registered: unique dose (29.8%), 24 hours (29.8%), 12 hours (12.8%) and 8 hours (27.7%). Average age was 74.3 years (95% CI 70.4 to 78.3). No mean difference in age was found between men and women (p=0.32). There were significant differences between those adults not anticoagulated and those anticoagulated (p=0.001; 12.1 (95% CI 5.1 to 19.2)) and between VKA treated and not treated (p=0.0001; 14.4 (95% CI 7.4 to 21.4)). Pearson correlation of INR reversal was significantly related to the original INR value (r=-0.99 (95% CI -0.99476 to -0.98301); p=0.000) and VKAs/no VKAs (r=-0.52 (95% CI -0.70 to -0.27); p=0.000) but was not related to the number of doses administered (0.14 (95% CI -0.18 to 0.42); p=0.39) or age (p=0.12 (95% CI -0.39 to 0.18); p=0.44).

Conclusion and relevance Even though the INR is not universally accepted as a parameter for evaluating haemorrhage risk, it demonstrates that phytonadione reversal of an elevated INR depends on the VKA treatment status of the patient and the initial INR value but not the number of doses administered or age.

REFERENCES AND/OR ACKNOWLEDGEMENTS

No conflict of interest.

4CPS-014 CLINICAL AND ASSISTED IMPACT OF ISCHAEMIC ICTUS IN PATIENTS TREATED WITH ORAL ANTICOAGULANTS

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10.1136/ejhp-pharm-2020-eahpconf.115

Background and importance Anticoagulants are one of the therapeutic groups most frequently involved in drug related problems in the emergency services. However, the therapeutic management and the impact of assistance for those anticoagulated patients who suffer a stroke episode are not known.

Aim and objectives To describe the therapeutic management and healthcare impact of patients with atrial fibrillation treated with oral anticoagulants (OAT) admitted in an emergency services due to a thromboembolic stroke.

Material and methods This was a retrospective observational study. Adult patients (>18 years old) with atrial fibrillation receiving treatment with OAT admitted for cardioembolic stroke were included (January 2017–June 2019). Anticoagulant dosing prior to the stroke episode was evaluated. The

modified Rankin Scale (mRS) score and National Institutes of Health Stroke Scale (NIHSS) score at admission and discharge, anticoagulant treatment prescribed after the episode and number of consultations to the emergency department in the year after hospital discharge were recorded.

Results Thirty-two patients were included (mean Age 75.2 (11.8) years): 22 (68.7%) were treated with vitamin K antagonists (VKA) and 10 (31.2%) with direct oral anticoagulants (DOACs). Eleven (34.4%) patients had a mRS score of 0 prior to the episode, 6 (18.8%) had a score of 1, 13 (40.6%) a score of 2 and 2 (6.2%) a score >2. The median score on the NIHSS scale at admission was 14 points (IQR 10–20) and 1 (0–7) point at discharge. Five (15.6%) patients died during hospitalisation. Among patients receiving VKA treatment, 13 (59.1%) had an international normalised ratio of <2 points at admission. Regarding DOACs, 5 (50.0%) patients had lower doses than the dose recommended. Of the 27 patients discharged, 17 (62.9%) changed their anticoagulation treatment at discharge, 2 (7.4%) increased their previous dose and in 2 (7.4%) patients the anticoagulant therapy was withdrawn. Fifteen (55.5%) patients presented again to the emergency department during the year after discharge: 7 (46.6%) were events directly related to anticoagulant therapy.

Conclusion and relevance A significant percentage of patients treated with DOACs suffering from stroke were under dosed. Consultations after discharge were frequent in this group of patients. Our results open the door to the design of multi-centre studies that will allow us to verify the best anticoagulation strategies in this group of patients.

REFERENCES AND/OR ACKNOWLEDGEMENTS

No conflict of interest.

4CPS-015 SITUATIONAL ANALYSIS OF POSTOPERATIVE IRON SUPPLEMENTATION PRESCRIPTIONS IN A PLASTIC SURGERY DEPARTMENT

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10.1136/ejhp-pharm-2020-eahpconf.116

Background and importance Following the computerisation of prescriptions in the plastic surgery department of our hospital, some protocols have been modified, leading to an increase in iron supplementation (IS) prescriptions by anaesthetists in postoperative care.

Aim and objectives The aim of our study was to perform an inventory of iron prescriptions and administrations in order to assess their relevance

Material and methods A retrospective analysis was performed from 29 January 2019 to 29 August 2019. Compliance of IS administrations with preoperative prescriptions and biological examinations was assessed. The local protocol recommended first intention use of iron saccharose hydroxide (ISH) when possible (due to the cost of ferric carboxymaltose (FCM)) and also defined the relevant biological parameters to achieve these administrations (1 g of FCM or two injections of 300 mg ISH separated by a 48 hour interval if haemoglobin <12 g/dL and ferritin <100 µmol/L or ferritin <600 µmol/L and transferrin saturation factor <0.2).

Results Sixty-nine IS prescriptions were collected, of which 32 (46%) were followed by an administration. The average length

of stay (ALS) for patients was 2.8 days. Of these 69 prescriptions, 27 (39%) were not associated with the prescription of an iron biology (IB). Twenty-two administrations of ISH, 7 of FCM, 1 of ferrous fumarate and 2 of ferrous sulphate, were performed. Of these 32 administrations, 21 (66%) were justified by the IB. For the 11 others, the IB was incomplete. Of the 22 patients who received ISH, 18 (82%) received only one postoperative dose.

Conclusion and relevance In agreement with the protocol, ISH was mainly prescribed. Nevertheless, the ALS of the patients was incompatible with the administration recommendation. We note that in each case where an IB was complete, an IS was justified in postoperative care. This work will be followed by a consultation with the anaesthetists. Reflection on the dose and galenic of IS in relation to the iron deficiency calculation for each patient would be interesting in the context of a possible improved recovery programme after surgery.

REFERENCES AND/OR ACKNOWLEDGEMENTS

No conflict of interest.

4CPS-016 INAPPROPRIATE USE OF HUMAN ALBUMIN IN A TEACHING HOSPITAL

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10.1136/ejhp-pharm-2020-eahpconf.117

Background and importance Albumin is a widely used medication for the treatment of critically ill patients, such as those with cirrhosis, burns patients and neonatal patients. However, its management is still a real challenge because of its high cost and controversial uses.

Aim and objectives The aim of the study was to determine the frequency of inappropriate albumin prescriptions according to guidelines and scientific data in a teaching hospital.

Material and methods Over a 4 month period, each prescription of human albumin in our teaching hospital was reviewed according to guidelines and recommendations. Data collected were: indication, clinical healthcare unit, patient sex and age, dosage and treatment times, and albuminaemia. Statistical analysis was performed by PSPP software.

Results A total of 230 prescriptions were studied during the 4 month period coming from 10 healthcare units. Among them, 201 prescriptions were included in this work concerning 80 patients with a sex ratio of 1.10 and mean age of 45.85 ± 25.84 years. Mean albuminaemia was 20.84 ± 5.14 g/L. The mean dosage was 3 ± 2 vial/day. Median duration of treatment was 2 days (IQI 4). The gastroenterology service ordered the most, with 92 orders (46%), followed by the paediatric service with 38 orders (19%). Seventy prescriptions (35%) were judged as inappropriate. The most frequent inappropriate indication was nephrotic syndrome with albuminaemia >20 g/l without hypovolaemia or pulmonary oedema (19 prescriptions, 9.5%) followed by major surgery indication with serum albumin >20 g/L (15, 7.5%). In total, 1694 vials of human albumin were consumed: 822 vials (48.5%) were consumed according to inappropriate indications. The estimated cost of inappropriate use was 15 000€ for a 4 months period.

Conclusion and relevance This study suggests that inappropriate use of human albumin is quite common with high costs. Hence adoption of comprehensive guidelines may reduce the