Background and importance Stroke prevention in atrial fibrillation (AF) is a major indication for oral anticoagulants. Appropriate use of anticoagulants reduces the relative risk of stroke by approximately 66%. Despite an abundance of evidence for this treatment, up to 40% of AF patients do not receive anticoagulant therapy. Decision support systems have shown promise in increasing guideline adherence to reduce therapeutic omissions.

Aim and objectives We aimed to develop and validate a screening tool to identify untreated AF inpatients.

Material and methods A computerised screening tool was developed integrating the following data from the patient's electronic health record (EHR): demographic, laboratory and medication data, ECG reports and allocation to specific care programmes. A decision process was applied, which consisted of (1) determining whether AF was present, (2) calculating the CHA₂DS₂-VASc score and (3) determining whether anticoagulant treatment was present during hospitalisation and/or in the pre-admission therapy. Subsequently, based on these three steps, a priority score was assigned to the patient, from 0 (no risk) to 5 (highest level of risk).

A validation study was done to assess the accuracy of this approach. Criterion and tool validity were ascertained by determining specificity and sensitivity, compared with a manual check of the EHR. Consistency regarding the priority score was determined by estimating Cohen's kappa (κ).

Results For the validation, 800 inpatients were included. The specificity and sensitivity of the tool for identification of patients with AF were 87.6% and 95.1%, respectively. Overall specificity and sensitivity for identification of AF patients with a CHA₂DS₂-VASc score ≥ 2 was 72.7% and 97.7%, respectively. Specificity and sensitivity to determine the presence of anticoagulants was 97% and 87%, respectively. There was good agreement between the priority score obtained by the pharmacist after EHR review and the one generated by the screening tool (κ unweighted 0.74; κ equal weighted 0.66).

Conclusion and relevance This screening tool to identify untreated AF inpatients was found to be reliable and valid with a high sensitivity. To further improve specificity, future investigations might focus on better digital structuring of patient data. Our future goal is to implement the AF screening tool in clinical practice to improve the use of preventative therapy and reduce the significant burden of stroke.

REFERENCES AND/OR ACKNOWLEDGEMENTS

Conflict of interest No conflict of interest

4CPS-226 EFFECTIVENESS OF CARBOXYMALTOSE IRON IN PREOPERATIVE ANAEMIA TREATMENT

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Background and importance The administration of carboxymaltose intravenous iron (CII) contributes significantly to the correction of perioperative anaemia and reduction of red blood cell transfusion (RBCT). RBCT is associated with an increased

risk of prolonged hospitalisation and mortality, so is recommended to use alternatives to RBCT to improve clinical outcomes and patient safety.

Aim and objectives To evaluate the effectiveness of CII for surgical patients in a third level hospital and to describe the transfusional requirements of patients after the surgical procedure.

Material and methods This was an observational, retrospective, single centre study including surgical patients who received CII between January 2017 and December 2018. Variables collected from the electronic clinical charts were: sex, age, CII dose, baseline and perioperative haemoglobin (HB), and time between CII administration and the surgical procedure. Exclusion criteria were: patients not undergoing surgery, administration CII after surgery and no preoperative or baseline HB data.

The main variable used to evaluate effectiveness was the percentage of patients with an increase in HB in the preoperative stage compared with baseline HB >1 g/dL, and the difference and number of transfusions after the surgical procedure. Data were expressed as mean $\pm$ SD, and the analysis test used was the χ^2 test.

Results 70 patients were included, 48 women (68.6%), with a mean age of 58.3 ± 15.0 years. The mean CII dose was 1274.3 ± 352.5 mg. Mean baseline and preoperative HB were 9.8 ± 1.2 and 11.0 ± 1.4 g/dL, respectively. The time between administration of CII and surgery was 37.7 ± 41.2 days. 78.6% ($n=55$) had an increase in HB in the preoperative stage compared with baseline HB, and 50.0% ($n=35$) of patients had an increase in HB >1 g/dL. 35.7% ($n=25$) of patients were transfused: patients who reached HB in the perioperative stage compared with baseline HB >1 g/dL were transfused less frequently than patients who did not reach this difference (72.0% vs 28.0%) ($p=0.006$).

Conclusion and relevance CII was clinically effective due to an increase in HB in most patients. In addition, CII administration reduced RBCT for the included patients. However, a comparative study with a cohort of surgical patients without CII administration is needed.

REFERENCES AND/OR ACKNOWLEDGEMENTS

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4CPS-227 HUMAN SERUM ALBUMIN: ANALYSIS OF USE

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Background and importance Human serum albumin (HSA) is widely used in clinical practice, although many indications are still being debated.

Aim and objectives To analyse the clinical indications for HSA and the level of evidence for them.

Material and methods This was an observational, retrospective, multidisciplinary study. Inclusion criteria were: patients >18 years admitted, patients treated in a specialised outpatient clinic or emergency department, in a secondary hospital, who had received at least one dose of HSA during 2019. Variables studied were: demographics, admission diagnosis, number of

HSA prescriptions, duration of treatment, previous serum albumin, previous infection, HSA indication and level of evidence of the indications.

The classification was based on the scale established by the American Society of Apheresis, which categorises four groups according to the degree of evidence:

- High priority (grade I): paracentesis induced circulatory dysfunction (PICD) after large volume paracentesis (>5 L); hepatorenal syndrome, renal failure after spontaneous bacterial peritonitis (SBP) and plasmapheresis.
- Reasonable evidence, but with available alternatives (grade II): resuscitation in critically ill patients with septic shock when crystalloids are insufficient.
- Weak evidence (grade III): hypervolaemic hyponatraemia in decompensated cirrhosis, awaiting liver transplantation, non-SBP bacterial infections in cirrhotic patients, prevention of PICD <5 L.
- Treatment not recommended (grade IV): other indications.

Results The study included 142 patients, 41% women, mean age 66 ± 11 years. The main admission diagnoses were: decompensated cirrhosis (32%), septic shock (31%), haemorrhagic shock (5%) and respiratory infection (4%). They received a total of 223 batches of HSA. The median duration of prescription was 3 days (IQR 2–4). The mean basal plasma albumin was 2.5 ± 0.5 mg/dL. 48% had a previous active infection. The major indications of HSA were: anasarca and hypoalbuminaemia (32%), prevention of PICD >5 L (17%), resuscitation in shock septic (13%) and protein malnutrition (9%). 26% of the indications had grade I evidence, 13% grade II, 9% grade III and 53% grade IV.

Conclusion and relevance There is an important use for HSA in hospitals with a low level of evidence. It is necessary to train prescribing doctors to optimise the use of HSA in hospital.

REFERENCES AND/OR ACKNOWLEDGEMENTS

Conflict of interest No conflict of interest

4CPS-228 VERNAKALANT VERSUS FLECAINIDE FOR CONVERSION OF RECENT ONSET ATRIAL FIBRILLATION IN PATIENTS ATTENDING THE EMERGENCY DEPARTMENT

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Background and importance Flecainide is commonly used for conversion of recent onset (<48 hours) atrial fibrillation (AF) in haemodynamically stable patients attending the emergency department (ED). Vernakalant is a relatively new antiarrhythmic drug that showed efficacy and safety compared with placebo and amiodarone in clinical trials but few data are available regarding its effectiveness compared with oral flecainide.

Aim and objectives To evaluate successful cardioversion in patients treated with vernakalant or oral flecainide with recent onset AF attending the ED.

Material and methods A single centre, non-randomised, retrospective study was conducted in patients diagnosed with recent

onset AF in the ED. Vernakalant was approved by the Pharmacy and Therapeutics Committee in June 2018. The flecainide group included patients who attended the ED from January to June 2018 and the vernakalant group from July 2018 to October 2020. Patients received intravenous vernakalant (3 mg/kg followed by 2 mg/kg if necessary) or oral flecainide (200–300 mg). Sociodemographic and clinical variables were obtained from electronic health records. The primary endpoint was percentage of patients that achieved sinus rhythm in the ED. Secondary outcomes were conversion time to sinus rhythm, length of stay in the ED and percentage of patients that maintained sinus rhythm after 3 months of cardioversion.

Results 63 patients were included in the study; 20 received vernakalant and 43 flecainide. Median age was 59 years (IQR 53–66) and 63% were men. Baseline characteristics were similar in both groups. Cardioversion was successful in 80% of patients treated with vernakalant and in 64.3% treated with flecainide ($p=0.21$). Conversion time was 13 min in the vernakalant group versus 489 min in the flecainide group ($p<0.001$). Patients treated with vernakalant were discharged earlier from the ED compared with those treated with flecainide (9 vs 20 hours, respectively; $p=0.0061$). The percentage of patients who maintained sinus rhythm after 3 months was 92% in both groups ($p=0.97$). One patient in each group experienced a mild adverse event (itching at the injection site with vernakalant and temporary hypotension with flecainide).

Conclusion and relevance Vernakalant achieved a higher cardioversion rate than oral flecainide in recent onset AF patients. Conversion was significantly faster and was associated with shorter hospital stay. However, long term effectiveness was similar between both drugs, as well as the safety profile.

REFERENCES AND/OR ACKNOWLEDGEMENTS

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4CPS-229 ANALYSIS OF CLINICAL PHARMACIST INTERVENTIONS IN THE HEART FAILURE DAY HOSPITAL

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Background and importance Heart failure (HF) affects 15% of the population between 70 and 80 years. It causes 3–5% of hospitalisations, 50% of which could be avoided. Hence a multidisciplinary HF day hospital (HFDH) was recently created in our centre where the clinical pharmacist performs the medication reconciliation (MR) process and identifies, resolves and prevents drug related problems (DRP).

Aim and objectives To analyse the interventions carried out by the clinical pharmacist in the HFDH for the first 6 months.

Material and methods Every day the clinical pharmacist performs the MR process for one patient, checking the patient's clinical records, blood tests and all prescriptions from the different specialists and primary doctor. After that, the pharmacist interviews the patient to confirm all the medication they are taking and how they are taking it. We identified medication discrepancies and DRP, and made a medication list with the problems detected and our recommendations. A reconciliation report was added into the patient's electronic medical