levels. However, they are also associated with deleterious outcomes.

Purpose We aimed to characterise the impact of blood transfusions in length of stay (LOS) and in-patient mortality, in a population of hospitalised anaemic patients treated with IV iron.

Material and methods This was a retrospective cohort study. Patient records from a Portuguese General Hospital, with at least one inpatient administration of iron sucrose (IS) in 2014–2015 or ferric carboxymaltose (FC) in 2016 (when FC became available), were reviewed. Adult anaemic patients with at least one Hb evaluation before and after the administration of IV iron were included. Endpoints assessed comprised the association of blood transfusions with LOS and in-patient mortality, adjusted for sex, age and baseline Hb level. Statistical analysis included a generalised linear mixed-effects model and logistic regressions, using a 5% significance level.

Results Data was collected for 1178 patients, of which 878 were treated with IS and 300 with FC. Mean age was 63.9 and 71.1 for patients treated with IS and FC, respectively. The majority of patients were female: 61.4% and 51.3% for the groups treated with IS and FC, respectively. Average baseline Hb level was 8.4 g/dl for both groups. The majority of patients required blood transfusions in both groups: 58.0% in the IS and 62.9% in the FC.

Receiving at least one blood transfusion increased the LOS by 21% (95% CI: 8 to 35) in the IS group and 28% in the FC group (95% CI: 3 to 60).

The in-hospital mortality risk increased 2.5-fold (95% CI: 1.4 to 4.3) in patients treated with IS and who received a blood transfusion. As for patients treated with FC, in-hospital mortality was 4.3 times (95% CI: 1.6 to 12.1) higher in patients who received a blood transfusion.

Conclusion Blood transfusions impacted adversely on patients' outcomes across different groups. Therefore, blood transfusions should be carefully considered, in accordance with the most recent patient blood management guidelines.

REFERENCES AND/OR ACKNOWLEDGEMENTS

Conflict of interest Corporate-sponsored research or other substantive relationships: this study was developed with financial support from Vifor Pharma. The authors had no restrictions or limitations during the study.

5PSQ-017 IMPLEMENTATION AND MONITORING OF A PROTOCOL FOR THE USE OF INTRAVENOUS IRON

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Background The Pharmacy and Therapeutics Committee approved in May 2017 a protocol for the prescription of intravenous iron in order to achieve the correct use of it in the hospital, and the establishment of an iron sucrose complex as first choice in admitted patients.

Purpose The objective of this study was to assess the degree of adaptation of the prescriptions to the protocol.

Material and methods We conducted a retrospective observational study from May 2017 to July 2018. In order to assess the degree of adaptation of the prescriptions it was checked if the requests were received correctly completed for type of patient (inpatient or outpatient), medical service, diagnosis and

cause and patient's bodyweight, and if there were iron metabolism data (transferrin saturation, serum ferritin and iron) previous to the request. We also recorded the pharmaceutical product prescribed (ferric carboxymaltose or sucrose). Likewise, we reviewed if administered doses were correct, taking into account the theoretical deficiency calculated according to the Ganzoni formula. Dosage was considered correct if the difference between the administered dose and the theoretical deficiency did not exceed ± 500 mg in ferric carboxymaltose and ± 200 mg in sucrose.

Results A total of 271 prescriptions were analysed (outpatients 51.3%). The internal medicine department was the main service prescriber (47.2%), followed by the gastroenterology department (21.8%).

The principal medical diagnosis was anaemia. The cause was unknown in 35.5% of patients. Concerning the three main reasons for prescription, in descending order they were: need for fast iron replenishment (56.5%), inefficiency or intestinal malabsorption syndromes (14.7%) and intolerance to oral iron or impossibility to an oral regimen (11.4%). The reasons were unknown in 4.1%. Data of iron metabolism was not available in 34.7% of requests.

Ferric carboxymaltose was the pharmaceutical product chosen in most of the patients (54.6%), of which 62% were outpatients. The total dose administered did not match the theoretical deficiency calculated in 41.3% of cases.

Conclusion The lack of data in many orders received in the pharmacy department makes it difficult to verify the appropriateness of the prescription to the protocol in many cases. This highlights that protocolisation is a dynamic process which requires a continuous assessment to ensure its utility.

Ferric carboxymaltose was used more frequently in iron replenishment in outpatients and iron sucrose in hospitalised patients.

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5PSQ-018 IMPLEMENTATION OF PARENTERAL NUTRITION PRESCRIBING SOFTWARE IN A NEONATAL INTENSIVE CARE UNIT

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Background Parenteral nutrition in neonatal intensive care units is a daily activity with extreme risks. These risks are mainly related to the immaturity of neonates, a sensitive population. The computerisation of the process of prescription is a promotional tool to reduce the risks.

Purpose This study aimed to assess the interest in implementing software to help prescribers of parenteral nutrition in neonatology.

Material and methods This prospective comparative study was conducted in a neonatal unit, during a period of 3 months. It looked to evaluate the process of preparation of parenteral nutrition mixtures before and after the implementation of the prescribing software. This software was developed and validated by a team of doctors and pharmacists. The evaluation was performed by making a comparison between the errors that occurred during the manual