antihypertensives class, 184 for M04-gout preparations, 135 for C10-lipid modifying agents and 218 for B03-antianaemic preparations. 64% of patients (139) used gastroprotectors, especially proton pump inhibitors (PPIs). 3 DDIs, of 289 detected, were considered contraindicated and potentially serious, and were due to antipsychotic drugs. Drugs most responsible for DDIs were: cardioaspirin, PPIs, angiotensin receptor blockers and diuretics. 975 (4.2 ± 2.2 per patient) and 571 (2.4 ± 1.7 per patient) inappropriate drugs were identified according to STOPP criteria and Beers criteria, respectively.

Conclusion and relevance Polypharmacy is associated with a high incidence of DDIs and an increased risk of mortality and hospitalisation. The use of the ICT tool and the clinical pharmacist who bring their contribution in terms of pharmacological and pharmacokinetic knowledge have significantly contributed to the improvement in prescriptive appropriateness and minimised the risk of adverse events.

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Conflict of interest No conflict of interest

4CPS-404 MULTIDISCIPLINARY TEAM TO OPTIMISE INDIVIDUALISED SPECIAL DRUG PRESCRIPTIONS AND AUTHORISATION BY HOSPITAL MEDICAL DIRECTOR THROUGH AN INFORMATIC APPLICATION

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Background and importance Special drug prescriptions and authorisation by the hospital medical director is a necessary but time consuming activity that could even delay the start of treatment in some cases. To avoid documents and improve traceability, since 2014 our third level hospital is using an internal application (Rafpharma). This works as a mailbox: the treatment request for a specific patient is created by the physician, his head of the service agrees, the pharmacy service assesses the suitability and the medical director (MD) authorises/denies the treatment requested.

Aim and objectives To optimise the individualised special treatments requests circuit.

Material and methods A multidisciplinary working team (MWT) was created, including five hospital pharmacists, the head of the pharmacy department (PD), an internal medicine physician, the hospital MD and a hospital informatic, aimed at analysing all requests, identifying inefficiencies and proposing solutions to optimise the circuit.

Results Nine work team meetings were held between February and June 2018. Each of the 1641 requests in 2017 were analysed. The main causes reducing the efficiency of the system were: high volume of requests, time spent in the application and lack of knowledge by the persons involved. With the aim

of improving the efficiency of the system, the working group implemented the following measures.

1. Reduced the number of treatments that required authorisation from the MD, with the agreement of the pharmacy and therapeutics committee (FTC). This was possible by avoiding the need for special requests for certain drugs, affecting 39% of all the requests; encouraging three medical services to request approval for off-label use by the FTC, of which two did; and finally the group recommended that several medical services make a formal request to include 11 drugs in the hospital (only 3 have been requested).
2. Optimisation of Rafpharma application by the informatic department.
3. Development of Rafpharma user protocols by user profile.
4. Planning of specific training sessions in the departments involved.

Conclusion and relevance The optimisation process of the individualised request circuit led to improvement in the three main problems detected. The group reduced the circuit's workload by nearly 40%. The creation of MWTs makes approaching any key process from all points of view possible, allowing proposals to be made for optimisation agreed upon.

REFERENCES AND/OR ACKNOWLEDGEMENTS

Conflict of interest No conflict of interest

4CPS-405 STRONGYLOIDES STERCORALIS PROPHYLAXIS WITH IVERMECTIN IN COVID-19 PATIENTS

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Background and importance A preliminary report of the RECOVERY trial revealed a survival benefit related to the use of dexamethasone in hospitalised patients with coronavirus disease 2019 (COVID-19) (CM1). However, corticosteroids have an uncommon, but preventable, complication associated with its immunosuppressive mechanism of action: *Strongyloides stercoralis* hyperinfection or dissemination syndrome. *S. stercoralis* infection should be ruled out in patients from endemic areas before starting immunosuppressive treatment. As the results of the serological tests are not immediate, certain patients would benefit from preventive treatment with ivermectin.

Aim and objectives To evaluate the effectiveness and safety of ivermectin for prophylaxis of *S. stercoralis* hyperinfection syndrome in COVID-19 patients from endemic zones treated with corticosteroids or immunosuppressive treatment.

Material and methods A retrospective observational study was performed in a tertiary level hospital including all COVID-19 patients from *S. stercoralis* endemic areas and treated with prophylactic ivermectin between March 2020 and September 2020. Demographic and clinical features were obtained from the electronic patient clinical history (DIRAYA) and the electronic prescription programme (PRISMA). Effectiveness was defined as the non-presentation of *S. stercoralis* hyperinfection

or dissemination syndrome. Safety was evaluated describing adverse events (AE).

Results 35 COVID-19 patients from endemic areas were admitted and treated with ivermectin 6 mg/8 hours for 2 days. 52% of patients were women, with an average age of 42.84 ± 11.38 years. The patients treated with ivermectin were from Latin America, and the most frequent countries were: 48% Bolivia, 24% Nicaragua, 12% Ecuador, 8% Colombia and 8% Peru. Immunosuppressive treatment was: 83% dexamethasone 6 mg/24 hours, 14% methylprednisolone bolus 250 mg, 12% tocilizumab 400 mg and 3% no immunosuppressive treatment. Three (9%) of the patients presented with positive *S. stercoralis* serology. However, they did not develop *S. stercoralis* hyperinfection or dissemination syndrome. Furthermore, no patient had eosinophilia, with an average eosinophiles blood count of $0.04 \pm 0.09 \times 10^3/\mu\text{g}$. None of the patients had adverse events.

Conclusion and relevance Prophylactic treatment with ivermectin was safe. Patients from endemic areas who should start immunosuppressive treatment as soon as possible could be treated prophylactically with ivermectin. Nevertheless, the number of patients and positive cases were small and more studies are needed to generate evidence.

REFERENCES AND/OR ACKNOWLEDGEMENTS

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Section 5: Patient safety and quality assurance

5PSQ-119 PROTON PUMP INHIBITOR PRESCRIPTION PATTERNS AND ASSOCIATED COMPLICATIONS IN THE PAEDIATRIC INTENSIVE CARE UNIT

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Background and importance Proton pump inhibitors (PPIs) are regularly prescribed in the paediatric intensive care unit (PICU) for prevention of stress ulcer and upper gastrointestinal bleed (UGIB). There is no clinical consensus regarding PPI use in the PICU. The reported incidence of UGIB in the PICU is low (0.4–5%). Having ≥ 2 risk factors has been associated with a higher risk of clinically relevant UGIB in the PICU (severity score at admission PRISM >10 , coagulopathy, mechanical ventilation). Despite identification of these risk factors, studies fail to show that stress ulcer prophylaxis significantly decreases UGIB in the PICU. Moreover, recent studies in mostly adult patients have associated PPIs in the acute setting to a higher risk of nosocomial infections and hyponatraemia.

Aim and objectives To describe PPI prescription patterns in the PICU and explore potentially associated clinical complications such as nosocomial infections and hyponatraemia.

Material and methods A single centre, retrospective, cohort study was conducted on PICU patient charts from 1 January 2017 to 31 December 2018.

Results 768 patients were included of whom 234 received a PPI (30.6%). PPI exposed patients were younger ($p < 0.05$), weighted less ($p < 0.05$) and were more likely to have had surgery ($p < 0.05$), a central venous access ($p < 0.05$), parenteral nutrition ($p < 0.05$), coagulopathy ($p < 0.05$), mechanical ventilation ($p < 0.05$) and a longer PICU stay ($p < 0.05$). The most common indication for PPI was stress ulcer prophylaxis ($n=178$, 76.1%) but only 12.4% ($n=22$) had ≥ 2 UGIB risk factors. Nosocomial infection rate was 9.4% in the PPI group versus 2.2% in the non-exposed group ($\text{RR}=3.40$ (95% CI 1.76 to 6.57), $p < 0.05$). Once adjusted for confounding variables, PPI exposure was independently associated with a higher risk for nosocomial infection ($\text{OR}_a=2.42$ (95% CI 1.17 to 5.14), $p=0.02$). PPI exposure was associated with an increased risk of hyponatraemia ($\text{RR}=5.18$ (95% CI 2.16 to 12.43), $p < 0.05$).

Conclusion and relevance Our study showed an overuse of PPIs in our PICU, with poorly documented indications. PPIs were statistically and independently associated with an increased risk of nosocomial infections in our population. Prospective randomised trials are needed to evaluate the risk–benefit ratio of PPIs in the PICU. Our results suggest the need for a more rational use of PPIs in the PICU and highlight the lack of clinical guidelines and safety data regarding stress ulcer prophylaxis in critically ill children

REFERENCES AND/OR ACKNOWLEDGEMENTS

Conflict of interest No conflict of interest

5PSQ-120 USE OF PROTON PUMP INHIBITORS IN A GERIATRIC HEALTHCARE CENTRE

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Background and importance The use of proton pump inhibitors (PPIs) has increased considerably in recent years, probably due to their prescription in unjustified clinical situations or their prolonged maintenance without prescription revision, which can expose the patient to adverse effects.

Aim and objectives To determine the prevalence of PPI prescriptions without a clear indication in elderly patients institutionalised in a geriatric healthcare centre (GHC) that would require their deprescription assessment, as well as to quantify the prevalence of fractures in these patients.

Material and methods An observational, descriptive, cross sectional study was conducted in all institutionalised patients in a GHC associated with a tertiary hospital in May 2020. The variables collected were: sex, age, PPI prescription, indication, duration of PPI treatment, number of drugs prescribed, concomitant prescription of a gastrolesive drug and bisphosphonates, history of upper gastrointestinal bleeding or gastroduodenal ulcer, and history of fracture. Suitable indications for a PPI were those included on the label.

Results GHC is a 120 bed residence with 95 patients. 73.7% were women and mean age was 82.3 ± 8.3 years. At the date of the study, 78 patients (82.1%) were being treated with a PPI, of which a clear indication according to label was found in 51.3%. The prescribed PPIs were: omeprazole 20 mg in 96.2%, lansoprazole 15 mg in 1.3% and lansoprazole 30 mg