4CPS-011 CLINICAL AND ECONOMIC IMPACT OF PHARMACIST ANTIMICROBIAL INTERVENTIONS IN A SMALL HOSPITAL

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Background and Importance Several studies have indicated that pharmacists can play a key role in promoting the optimal use of antimicrobials and monitoring the prescriptions.
Aim and Objectives To assess the potential clinical and economic impact of pharmacist interventions (PIs) to improve antibiotic prescribing practices for hospital inpatients.
Material and Methods Prospective study in a public hospital (<200 beds) from 1 January 2019 to 31 December 2020. All inpatients who received at least 24 hours of antimicrobial therapy were included. Any discharged patient who was readmitted was considered as a new patient. The pharmacist performed and recorded PIs in the electronic prescribing, focused on highly restricted drugs and prescriptions for >10 days. When necessary, the pharmacist interacted directly with the prescriber in person or by phone. To assess the potential impact of PIs, we utilised the CLEO tool.[1]
Results A total of 847 antimicrobial PIs were proposed (in 696 patients), being 88% accepted (table 1). Regarding the clinical impact of PIs, the number of avoids or fatality PIs was 30 (4%). Almost half were graded as major (42%). PIs classified as moderate were 38%, minor or null significance were 17%. No adverse events were noted after implementing a PI in any patient. In relation to economic impact, 79% mean in a decrease in cost, 3% no change and 18% an increase in cost. The total saving in the study period was € 164953.

Abstract 4CPS-011 Table 1

Pharmacist interventions (n = 847)	n (%)	Acceptance (%)
Discontinuation due to excessive duration	198(24)	172(87)
Therapy de-escalation	130(15)	105(81)
Dose adjustment or interval modification	128(15)	128(100)
Deleting an antibiotic of the complete treatment due to use of redundant antimicrobial therapy	103(12)	97(94)
Switching from intravenous to oral administration	93(11)	75(81)
Changing the empirical therapy because of inappropriateness	85(10)	72(85)
Therapeutic escalation	58(7)	55(95)
Discontinuation due to a lack of indication to proceed	44(5)	37(84)
Others	8(1)	7(88)

Conclusion and Relevance PIs carried out to improve the use of antimicrobials positively impact on clinical and economic outcomes, with a high acceptance by physicians.

REFERENCE

1. Vo HT, *et al*. Working group 'valorization of pharmacist interventions' of the French society of clinical pharmacy. CLEO: a multidimensional tool to assess clinical, economic and organisational impacts of pharmacists' interventions. *Eur J Hosp Pharm* 2021;**28**(4):193–200.

Conflict of Interest No conflict of interest

4CPS-013 TREOSULFAN-BASED CONDITIONING REGIMEN FOR ALLOGENEIC HAEMATOPOIETIC STEM CELL TRANSPLANTATION IN CHILDREN WITH SICKLE CELL DISEASE: EFFICACY AND SAFETY

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Background and Importance Allogeneic haematopoietic stem cell transplantation (allo-HCT) is the only curative therapy in patients with sickle cell disease (SCD). Conditioning regimens traditionally were busulfan based. Treosulfan shows advantages such as intense immunosuppressive activity, low extramedullary toxicity and linear pharmacokinetics that decreases variability.
Aim and Objectives To evaluate safety and potential complications associated to allo-HCT after treosulfan-based conditioning regimen in children with SCD.
Material and Methods Retrospective, observational, unicentric study. Inclusion criteria comprised paediatric patients diagnosed with SCD who had undergone allo-HCT at a tertiary hospital between April 2015 and September 2022. Conditioning regimen included thiotepa, treosulfan, fuldarabine and anti-thymocyte globulin. Variables: gender, age, age of diagnosis, age of allo-HCT, type of HCT, graft versus host disease (GvHD) prophylaxis, seizure prophylaxis, veno-occlusive disease (VOD) prophylaxis, cumulative incidence of GvHD, non-haematological toxicity (potentially associated to conditioning regimen) during the first 30 days after HCT, graft failure, peripheral blood chimerism data collected and death related to HCT. Disease-free survival and overall survival after HCT were also measured.
Results 31 patients were included in the study (17 female, 14 male). Median age of diagnostics was 2 months (2–120) and median age of allo-HCT was 64 months (25–154). Median time between diagnostic and HCT was 4 years (1.9–12.5). Transplantation was the first for all children except for one (graft failure after a previous allo-TPH). All donors were human leucocyte antigen (HLA)-matched siblings. Double-therapy immunosuppression was used in GvHD prophylaxis (21/31 cyclosporine with mycophenolate mofetil and 10/31 tacrolimus with mycophenolate mofetil). All received levetiracetam and ursodeoxycholic acid for seizure and VOD prophylaxis, respectively.11/31 developed cutaneous GvHD (10 grade I-II and 1 grade III-IV) and 2/31 grade I-II hepatic GvHD. 4/31 developed grade I-II mucositis and 4/31 grade III-IV mucositis. 3/31 cases of mild diarrhoea, 5/31 neurological toxicities (seizures and encephalopathy) and 1/31 case of hepatomegaly (not associated to VOD) were registered. All resolved adequately. 25/31 children showed complete chimerism in peripheral blood at the end of follow-up. Immunosuppression was enhanced in case of mixed chimerism .There were no graft failures. All children are alive and remain disease-free after median follow-up of 47 months (12–78).
Conclusion and Relevance Treosulfan-based conditioning shows clinically manageable toxicity profile and low morbidity and mortality.

REFERENCES AND/OR ACKNOWLEDGEMENTS

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