visits, and therefore reducing SARS-CoV-2 transmissions. Otherwise, to maintain the sustainability of the implanted telepharmacy system, using the resources efficiently, it is necessary to apply patient stratifications tools, which allows access to this service to those patients who need it the most.

REFERENCES AND/OR ACKNOWLEDGEMENTS

Conflict of interest No conflict of interest

4CPS-317 IMMUNOSUPPRESSIVE TREATMENT MANAGEMENT IN A COHORT OF HOSPITALISED SOLID ORGAN RECIPIENTS AFFECTED BY COVID-19

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Background and importance Management of immunosuppression in recipients of solid organ transplantation (SOT) is challenging. Drugs used in COVID-19 involve drug–drug interactions (DDIs) with immunosuppressants.
Aim and objectives To describe DDIs in hospitalised SOT recipients (SOTr) and to analyse DDI management and their clinical impact.
Material and methods A retrospective single centre study was conducted in SOTr with COVID-19 hospitalised from 11 March to 25 April. Clinical data and pharmacotherapy were recorded from admission up to 28 days or discharge. Lexicomp was used to detect and categorise DDIs according to: risk level (X: avoid combination; D: consider therapy modification; C: monitor therapy; B: no action needed), reliability rating and severity. 46 patients were included: 33 (71.7%) men, aged 62.7 ±12.6 (mean±SD) years. They had received kidney (30; 56.2%), lung (13; 28.3%) or liver (3; 6.5%) transplants.
Results Immunosuppression at admission: tacrolimus (41; 89.1%), mycophenolate mofetil/mycophenolate sodium (28; 60.9%), prednisone (39; 84.8%), everolimus (7; 15.2%), sirolimus (7; 15.2%) and cyclosporine (1; 2.2%). 106 DDIs affecting 42 (91.3%) patients were detected (patients could have >1 DDI). DDIs were classified as confirmed (18; 39.1%) or potential (33; 71.7%). Immunosuppressants with DDIs: tacrolimus (65; 61.3%), everolimus (12; 11.3%), sirolimus (6; 5.7%), methylprednisolone (12; 11.3%), prednisone (10; 9.4%) and mycophenolate (1; 0.9%).

Drugs for COVID-19 with DDIs: lopinavir/ritonavir (45; 42.5%), azithromycin (32; 30.2%), tocilizumab (15; 14.2%), darunavir/cobicistat (10; 9.4%), and hydroxychloroquine (4; 3.8%). DDIs were risk X (6; 5.6%), risk D (42; 40.8%), risk C (57; 53.7%) and risk B (1; 0.9%). The reliability rate of DDIs was excellent (0.9%), good (52.8%) and fair (44.3%). Severity was low, moderate and major in 6.6%, 84.9% and 8.5% of cases, respectively.

Immunosuppression was withheld in 33 (71.7%) patients due to DDIs. 36 (87.7%) of 41 patients receiving tacrolimus had 65 DDIs; tacrolimus was withdrawn in 22 (61.1%), reduced in 18 (50%) and increased in 4 (11.1%) cases. Seven patients receiving everolimus had 12 DDIs and 4 patients with sirolimus had 6 DDIs; immunosuppressant was stopped in all cases. Tacrolimus levels were supratherapeutic (>10 ng/mL) in 8 (25%) patients at admission, 13 (43.3%; n=30) at 48 hours, 10 (31.3%, n=32) at 7 days and 2 at 14 days (17.7%, n=28). No graft rejection was detected. Mean creatinine serum concentration was 2.2 mg/dL at admission and 2.6 mg/dL 7 days later. Two cases of acute kidney failure were attributable to tacrolimus intoxication.
Conclusion and relevance DDIs were highly prevalent in hospitalised SOTr with COVID-19. Pharmaceutical care is critical to promptly detect and manage DDIs in SOTr.

REFERENCES AND/OR ACKNOWLEDGEMENTS

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Conflict of interest No conflict of interest

4CPS-318 COMPOUNDING TACROLIMUS OPHTHALMIC OINTMENT 0.02% IN THE TREATMENT OF INFLAMMATORY AND AUTOIMMUNE OPHTHALMIC SYNDROMES: EFFECTIVENESS AND SAFETY ASSESSMENT

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Background and importance Inflammatory/autoimmune ophthalmic syndromes (IAOS) are often treated with corticosteroids in severe cases. However, in some cases, corticosteroids can be contraindicated, poorly tolerated or ineffective. This situation is common in paediatric patients who have a worse risk–benefit balance. Currently, evidence about using ophthalmic tacrolimus in IAOS is based in studies with monitoring duration reaching at most 4 weeks.
Aim and objectives To assess the effectiveness, tolerance and safety of compounded tacrolimus ophthalmic ointment 0.02% (CTOO) in the treatment of IAOS in paediatric and adult patients.
Material and methods We conducted observational retrospective research in paediatric and adult patients, recruited in our hospital with IAOS. Patients started treatment with CTOO once–twice/day+adjuvant therapy (AT) in January 2016 to April 2020, for 1 year at least. Effectiveness was assessed with hyperaemia grade (none, mild, moderate, severe) at 3, 6, 12 months, and grade of change noticed (GCN) at 1 and 12 months as a patient reported outcome. Tolerance/safety was determined at 1 week and 1 year. Every discontinuation was notified.
Results 30 patients (54 sick eyes) were recruited (27 women and 27 men). 32/54 were paediatric patients. The most common syndromes were vernal keratoconjunctivitis (18 eyes; 33.3%); atopic keratoconjunctivitis (14 eyes; 25.9%) and allergic conjunctivitis (8 eyes; 14.8%).

Hyperaemia was moderate–severe in 28 eyes (51.8%). It was reduced to 22.2% at 3 months, and to 9.3% at 12 months. No hyperaemia on day 0 was found in 21 eyes (38.9%) and which increased to 30 eyes (55.6%) at 3 months and to 41 (75.9%) at 12 months. After 1 month, 15 eyes (27.7%) had recovery of big or cleared grade, in 32 eyes (59.2%) recovery was mild–moderate and in 7 eyes (13.0%) no improvement was noticed. After a year, 15 eyes (27.7%) had reached the cleared grade. In contrast, 4 eyes had a deterioration after the treatment. Tolerance in the first week was: good (23 eyes; 42.6%), moderate (25 eyes; 46.3%) and poor in 6 eyes (11.1%) with no discontinuations. Tolerance at 1 year was good in 40 eyes (74.1%). However, in two eyes herpes virus infection was reported.

Conclusion and relevance This study had strong limitations: lack of placebo group, patients belonged to the same geographic zone and different adjuvant treatments were used. Strengths of the study were a balanced population, high prevalence of paediatric patients and a long monitoring period. CTOO+AT have shown effectiveness and safety, based on the outcomes considered, in IAOS. It might be a good alternative in cases of contraindications, poor tolerance or inefficacy to corticosteroids, especially in paediatric patients.

REFERENCES AND/OR ACKNOWLEDGEMENTS

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4CPS-319 PIRFENIDONE AND NINTEDANIB FOR THE TREATMENT OF THE IDIOPATHIC PULMONARY FIBROSIS: AN ITALIAN HOSPITAL EXPERIENCE

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Background and importance Idiopathic pulmonary fibrosis (IPF) is a severe pulmonary disease with few therapeutic alternatives and characterised by progressive decline in lung function. Pirfenidone and nintedanib are tyrosine kinase inhibitors that have been approved for clinical treatment in mild to moderate IPF in adults.
Aim and objectives The aim of this study was to review the use of pirfenidone and nintedanib in terms of effectiveness and safety in patients with mild to moderate IPF over 12 months of follow-up, through indicators such as the volume of air that can be exhaled with maximal effort (FVC) and the alveolar–capillary diffusion of carbon monoxide (DLco).
Material and methods A retrospective observational study was conducted in patients receiving treatment with pirfenidone and nintedanib from January 2018 to October 2020. Clinical data were collected from the electronic web based national register of Italian medicines. Measured variables were: age, sex, pathology severeness, forced vital capacity (FVC%), diffusion capacity of the lungs for carbon monoxide (DLco,%), before and after the start of treatment. The main outcome was the variation in FVC from baseline levels, considering it a positive response to the treatment if FVC did not decrease by more than 10%. The presence of adverse reactions was reviewed to assess safety.
Results In our hospital, we enrolled 70 patients receiving pirfenidone (50%) and nintedanib (50%). 81.4% of patients were men, with a mean age of 74±8 years. 57.1% had moderate pathology and 42.9% had mild pathology. 2.8% of patients left by voluntary decision and another 3.1% had progression of the pathology. The initial median FVC was 79.63 ±15.14 and median DLco was 51.74±15.13. After treatment, we obtained a median FVC of 78.31±15.65 and a median DLco of 48.09±16.38. 83.8% of treated patients had a positive response with a decrease of no more than 10% of FVC, and 22.1% of treated patients had an improvement in FVC >5%. 11.8% of treated patients had an improvement in DLco >5%. 14 patients had adverse reactions. The most frequent was dyspepsia (36%), followed by rash (25%); less frequent side effect were headache (8.4%) and diarrhoea (8.4%).
Conclusion and relevance Pirfenidone and nintedanib showed benefit in decreasing progression of IPF and had effectiveness and safety profiles similar to those of other studies, revealing that it is a well tolerated and effective drug. On the other hand, the adverse reactions were mild, but the rate of occurrence was high.

REFERENCES AND/OR ACKNOWLEDGEMENTS

Conflict of interest No conflict of interest

4CPS-320 IMPROVING MEDICATION ADHERENCE AND PATIENTS' EXPERIENCE AFTER HEART TRANSPLANT USING A MULTILEVEL EHEALTH INTERVENTION: THE MHEART CLINICAL TRIAL

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Background and importance Multimorbidity and therapeutic complexity are undermining health outcomes in chronic populations. Medication non-adherence may be a consequence of this complexity and is a direct cause of graft loss and death after a heart transplant (HTx). Effective interventions to improve medication adherence and lifestyle habits require a proactive interdisciplinary team and integrated care models. The development and implementation of internet based health technologies (eHealth) may lead to implementation of such chronic care programmes in clinical practice.
Aim and objectives To improve recipients' adherence to immunosuppressive medication (IS). Secondary objectives were to improve patients' experience of their therapeutic regimens (TR) and to optimise clinical practice.
Material and methods An eHealth model was implemented in a HTx hospital's outpatient clinic. The software developed (mHeart) was a mobile and website application (https://n9.cl/ajut). The model was validated previously in a pilot study.[1] For this purpose, an intensive, individually tailored, behavioural based multicomponent intervention performed using the mHeart features in an interdisciplinary environment was established. The study design is described in figure 1.
Results A total of 134 chronic stage HTx patients (mean age 55 (SD 14) years) were included (intervention n=71; control n=63). The mean follow-up was 1.6 (SD 0.6) years. At the end of the study, 86% were engaged with mHeart. Patients' experience of TR significantly improved in the intervention group (IG) versus the control group (CG): degree of inconvenience perceived by the patient (p=0.002), patient's knowledge of their regimen intakes (p=0.019), drugs names (p=0.006), drugs doses (p=0.030) and drugs indications remembered (p=0.003).

In addition, patient's awareness of the consequences of non-adherence significantly improved (p<0.01) and the number of adverse effects reported was significantly reduced to 3 ±2 in all groups (p=0.000). The non-adherence rate significantly improved in the IG versus the CG according to the SMAQ questionnaire (85% vs 46%) (OR=6.7 (2.9; 15.8); p=0.000). Because of the online follow-up, patients' in-clinic appointment needs with the clinical pharmacist and the intensity of the follow-up were significantly reduced in the IG (65%) versus the CG (35%) (OR=3.4 (1.7; 6.9); p=0.001).