retrospectively (January 2016 to December 2018). Post-implementation (January 2019 to July 2020), an initial PIP was identified prospectively in the CMA. The total number of recommendations and acceptance rate were recorded for the post-implementation period.

Results At baseline, the median proportion of residual PIPs was 69.0% (range 50.0–83.3%) with a median number of 13.1 (range 9.5–15.8) residual PIPs per day. After the CMA intervention, the median proportion and median number decreased to 11.8% (range 0–50%) and 2.2 (range 0–9.5), respectively. Clinical rules showed an immediate relative reduction of 66% ($p<0.0001$) in pain related residual PIPs. A significant decreasing time trend was observed during the post-implementation period. Over 1 year in the post-implementation period, the clinical pharmacists provided 1683 recommendations for 1427 individual patients during 1478 hospital admissions. The treating physicians accepted 74.3% of the recommendations.

Conclusion and relevance We proved that the CMA approach improved analgesic prescribing, as the number of pain related residual PIPs was reduced in a highly significant and sustained manner. The downward trend in the post-implementation period might indicate a learning effect on physicians, resulting in a higher acceptance rate of recommendations over time. More pharmacist involvement and the use of clinical rules during hospital stay should be further promoted to optimise appropriate prescribing of analgesics.

REFERENCES AND/OR ACKNOWLEDGEMENTS

Conflict of interest No conflict of interest

4CPS-337 PERSISTENCE OF BIOSIMILAR TREATMENT FOR IMMUNE MEDIATED INFLAMMATORY DISEASES IN CLINICAL PRACTICE

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Background and importance Maintaining persistence is a key element in pharmacotherapy follow-up. Adverse effects of biosimilars may be one of the main causes for discontinuing treatment.

Aim and objectives To analyse persistence as an effectiveness and safety indicator for different biosimilars in immune mediated inflammatory diseases (IMID) in clinical practice.

Material and methods A retrospective study was conducted in a regional hospital with a reference area of 110 000 inhabitants and 230 biological treatments (BT). All patients with an IMID who had received a biosimilar of infliximab, etanercept or adalimumab from the first biosimilar's entry in the pharmacotherapeutics guide until February 2020 were included. Variables studied were demographic data (gender, age), medical speciality, previous treatments and time receiving the biosimilar. Reasons for discontinuation and activity of the disease were registered. Data collection was done with SAVAC, an electronic prescription system. Statistical analysis was performed using SPSS Statistics V.22. Categorical variables are shown as percentages and quantitative variables as mean (SD).

Results 64 patients (27.8% BT) were included: 28 (43.8%) were men and mean age was 43.7 (SD 16.3) years. 26 (40.6%) patients had received previous BT, most of them with an anti-TNF (53.8%). Only 11 (17.2%) patients switched from the original to the biosimilar drug. Distribution by drug was: 27 (42.2%) infliximab, 21 (32.8%) etanercept and 16 (25.0%) adalimumab. Distribution by medical speciality was: 34 (53.1%) digestology, 26 (40.6%) rheumatology and 4 (6.3%) dermatology.

31 (48.4%) patients stopped or changed treatment: 13 (41.9%) infliximab, 12 (38.7%) etanercept and 6 (19.4%) adalimumab. Reasons were: 14 (45.2%) adverse effects, 14 (45.2%) inefficacy and 3 (9.6%) other reasons, mainly loss to follow-up. Persistence of treatment was 26 (SD 31.2) weeks. Adverse effects causing discontinuation of the biosimilar were: 3 (16.6%) cases of pain, 2 (11.1%) infections, 2 (11.1%) hypersensitivity reactions, 2 (11.1%) headache, 1 (5.6%) dyspnoea, 1 (5.6%) swelling, 1 (5.6%) asthenia, 1 (5.6%) dizziness, 1 (5.6%) diarrhoea, 1 (5.6%) arthralgia, 1 (5.6%) skin lesions, 1 (5.6%) pruritus and 1 (5.6%) lupus drug induced.

33 (51.6%) treatments remained active: 15 (45.4%) infliximab, 9 (27.3%) adalimumab and 9 (27.3%) etanercept. Persistence of treatment was 55 (SD 39.6) weeks. 27 (81.8%) patients were in remission, 3 (9.1%) presented low activity and 3 (9.1%) moderate activity.

Conclusion and relevance Patients that changed or stopped taking a biosimilar had an average treatment of 6 months. The most common reasons were adverse effects and inefficacy. Regarding adverse effects, 50% were subjective symptoms. A possible nocebo effect could not be discarded. Patients who continued with a biosimilar had a persistence of more than 1 year.

REFERENCES AND/OR ACKNOWLEDGEMENTS

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4CPS-338 USE AND EFFICACY OF TOCILIZUMAB IN PATIENTS WITH SEVERE COVID-19 PNEUMONIA

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Background and importance Tocilizumab is an anti-human IL-6 receptor monoclonal antibody used in the treatment of cytokine release syndrome in patients with pneumonia associated with coronavirus disease. Despite the data from the COVACTA study, tocilizumab continues to be the gold standard for patients in our centre.

Aim and objectives To describe the use of tocilizumab in the first peak versus the second peak of the SARS-CoV-2 pandemic, and to describe the results of the use of tocilizumab in both situations.

Material and methods All patients treated with tocilizumab were included in the study periods: first peak (March to June 2020) and second peak (August to the present 2020). Demographic and clinical variables were collected. Data were obtained from the electronic medical records and prescription applications.

Results 65 patients were included, 36 patients (55.38%) in the first peak versus 29 patients (44.62%) in the second peak.

Conclusion and relevance In the first peak, tocilizumab was prescribed to more serious patients: those admitted to the ICU, with a higher FINE score and needing aggressive support

therapy. In addition, it was prescribed in patients with a higher D-dimer. Doses and number of administrations were higher in the first peak. New scientific evidence led to the use of different concomitant treatments in the second peak: corticosteroids (second peak dexamethasone versus first peak methylprednisolone) and antiviral therapy (only remdesivir in the second peak). In the second peak, hospital and ICU stays were shorter, probably because tocilizumab was used in less serious patients. Despite this, no differences in mortality were observed. A study limitation was sample size.

Abstract 4CPS-338 Table 1

	1st peak	2nd peak
Median age (years)	64.8	63
Sex (n (%))		
Women	5 (13.9)	4 (13.8)
Men	31 (86.1)	25 (86.2)
Diagnosis (n (%))		
Bilateral pneumonia	31 (86.1)	23 (79.3)
Bilobar pneumonia	4 (11.1)	6 (20.7)
No pneumonia	1 (2.8)	0
ICU prescription* (n (%))	28 (77.7)	8 (27.6)
No ICU prescription* (n (%))	8 (22.2)	21 (72.40)
Charlson comorbidity index	3.1	3.1
APACHE (ICU patients)	8.0	10.2
FINE score (n (%))		
I	1 (2.8)	5 (17.2)
II	11 (30.5)	6 (20.7)
III	14 (38.9)	11 (37.9)
IV	7 (19.4)	6 (20.7)
V	3 (8.3)	1 (3.4)
Respiratory support at prescription time (n (%))	36 (100)	29 (100)
Mechanic ventilation (MV) (n (%))	19 (52.7)	2 (6.7)
VMASK (30–60%) (n (%))	8 (22.2)	9 (31)
Nasal cannula (n (%))	3 (8.3)	7 (24.13)
VMASK reservoir (n (%))	8 (22.2)	10 (34.48)
High flow oxygen (n (%))	0	1 (3.44)
PaO_2/FiO_2	125.8 (n=26)	158.3 (n=22)
No distress (n (%))	0	3 (13.63)
Mild (n (%))	6 (23.1)	5 (22.8)
Moderate (n (%))	5 (19.2)	2 (9.1)
Severe (n (%))	15 (57.7)	12 (54.5)
Doses administered (mean)	1.5	1.1
Dose administered (mg)	594.4	545
Mean D-dimer prior to administration (ng/mL)	6401	2436
Mean ferritin prior to administration (ng/mL)	1642	1904
Median PCR prior to administration (mg/L)	346	132
Mean LDH prior to administration (U/L)	538	442
Mean PCT prior to administration (ng/mL)	0.38	0.12
Type of corticoid* (n (%))		
Dexamethasone	11 (31.4)	25 (86.2)
Methylprednisolone	24 (68.5)	4 (13.8)
Concomitant antiviral treatment* (n (%))		
None	0	24 (82.8)
Remdesivir	0	5 (17.2)
Other (lopinavir–ritonavir/hydroxychloroquine/azithromycin)	36 (100)	0
Median days hospitalisation	37	12
Median days ICU	14	9
Deceased day 28 (n (%))	11 (30.5)	9 (31.0)
VM day 28 (n (%))	2 (5.5)	1 (3.4)
Oxygen support day 28 (n (%))	6 (16.6)	1 (3.4)
No oxygen day 28 (n (%))	2 (5.5)	2 (6.7)
Not hospitalised day 28 (n (%))	15 (41.7)	16 (55.2)

*p<0.05

REFERENCES AND/OR ACKNOWLEDGEMENTS

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4CPS-339 INTRATHECAL ADMINISTRATION OF BACLOFEN FOR THE REDUCTION OF SPASTICITY

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Background and importance Muscle spasticity is a consequence of traumatic brain and spinal cord injuries, stroke, cerebral paralysis and multiple sclerosis. It interferes with mobility and causes pain. There are numerous approaches in the treatment of spasticity. Intrathecal baclofen administration, through the positioning of a programmable pump in the abdomen and a catheter near the spinal column, is an option to reduce spasticity. The pump releases the liquid form of baclofen directly into the intrathecal space of the spinal cord, obtaining higher concentrations than oral therapy.

Aim and objectives To evaluate the long term efficacy on the decrease in spasticity and improvement in patients' quality of life treated by neurosurgery until September 2020.

Material and methods An analysis was made of medical records of patients treated until September 2020. Data were collected on: diagnosis, baclofen dosage, complications and/or side effects, degree of spasticity and improvement in quality of life. To evaluate spasticity, the Ashworth scale was used, from grade 0 (no increase of tone) to grade 5 (rigid limb in flexion and extension), by measuring the value obtained before implantation of the pump and at follow-up. The care and comfort caregiver survey was used to measure the patient's ability to perform personal care activities.

Results Neurosurgery treated 91 patients, 39 women and 52 men, with an average age of 42 years. The diagnoses are: 31 perinatal hypoxia, 15 multiple sclerosis, 18 post-trauma, 5 surgical complications, 4 transverse myelitis, 4 haemorrhagic events, 3 ischaemic events, 2 genetic causes, 2 cardiac arrests, 2 complications in childbirth, 1 PKAN syndrome, 1 overdose in a drug addict, 1 poliomyelitis, 1 vertebral collapse and 1 post vaccine. Patients received a daily baclofen dosage of 40–1.350 µg. Side effects such as skin rashes were recorded due to overdose, and the appearance of itching and agitation due to too low a dose. Complications related to the pump were pressure sores, infections and reservoir malfunction. Ashworth's score at follow-up decreased by an average of 2.5 points with a consequent improvement in quality of life, confirmed by the results of the questionnaire.

Conclusion and relevance Intrathecal administration of baclofen was an effective system in the treatment of spasticity and had a positive impact on improving quality of life.

REFERENCES AND/OR ACKNOWLEDGEMENTS

Conflict of interest No conflict of interest