

4CPS-018 EVOLUTION OF ANTIMICROBIAL USE IN COVID-19 PATIENTS

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10.1136/ejpharm-2023-eahp.64

Background and Importance Antimicrobial prescribing prevalence in COVID-19 patients is estimated to be around 75%, whereas bacterial coinfection prevalence is estimated to be less than 10%. This data shows the unnecessary use of antibiotics.

Aim and Objectives To compare the evolution of antimicrobial consumption in COVID-19 patients between the beginning of the pandemic and the third COVID-19 wave in our hospital.

Material and Methods Observational retrospective study conducted in a tertiary care hospital during March to June 2020 and May to August 2021 in COVID-19 Intensive Care Unit (CICU) and COVID-19 medical ward (CMW) patients. We extracted antimicrobial consumption data from the Pharmacy database (Silicon) and bed-days data from Admission Service.

We standardised antimicrobial consumption to defined daily doses (DDD)/100 bed-days. The descriptive analysis was performed with SPSS. We conducted a normality, an independence and a correlation test.

Results An 8% decrease in global antimicrobial use was observed. However, we found a 30% decrease in CMW, and a 39% increase in CICU.

The antibiotic use in the two periods showed a significance correlation ($p < 0,001$).

Conclusion and Relevance

- There is a light decrease of antimicrobial prescriptions in all COVID-19 patients.
- There is an important decrease in antimicrobial use in CMW and a considerable increase in CICU.
- These results suggest the need for more antimicrobial stewardship programmes in CICU

REFERENCES AND/OR ACKNOWLEDGEMENTS

Conflict of Interest No conflict of interest

4CPS-019 QUALITY ASSESSMENT OF THE EVIDENCE UNDERPINNING PHARMACIST-LED ANTIMICROBIAL STEWARDSHIPS INTERVENTIONS

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10.1136/ejpharm-2023-eahp.65

Background and Importance Antimicrobial resistance (AMR) is a global problem threatening public health, security and economic development. Antimicrobial stewardship (AMS) programmes have been implemented worldwide as they have demonstrated clinical, economical and ecological benefits promoting the adequate use of antibiotics. Pharmacist-led antimicrobial stewardships (AMS) interventions are proposed as key strategies to optimise antibiotic use and reduce adverse events, including the selection of antimicrobial resistance. Systematic reviews are at the highest level of the evidence validity hierarchy and provide insight and support policy-makers in clinical practice and research.

Aim and Objectives To evaluate the quality of the systematic reviews measuring the impact of PHARMACIST-LED AMS interventions.

Material and Methods An umbrella review of the systematic reviews on AMS was conducted following the PRISMA-P (Preferred Reporting Items for Systematic review and Meta-Analysis Protocols) guideline. Following prospective registration (Prospero CRD42022333928), two reviewers independently searched in PubMed, Scopus, Cochrane Library and Google Scholar, without language or time restrictions until June 2022. We included systematic reviews covering pharmacist-led AMS interventions. Two reviewers independently assessed methodological quality using a modified AMSTAR-2 tool and collated the main findings.

Results From 1004 citations, 20 reviews were eligible for inclusion summarising a total of 648 studies. The overall quality of 15 (75%) reviews was critically low. Four studies (20%) were of low quality and one study was of high quality (5%). The most loss-making domains involve providing a list of excluded studies, measuring the risk of bias (RoB) with an appropriate tool, to explicitly state that the review methods

Abstract 4CPS-018 Table 1

	MARCH-JUNE 2020			MAY-AUGUST 2021			EVOLUTION 2020-2021		
	CICU	CMW	GLOBAL	CICU	CMW	GLOBAL	CICU	CMW	GLOBAL
BED-DAYS	573	2346	2919	493	2114	2607			
Co-amoxiclav DDD/100BED-DAYS	0,9	22	17,9	1,2	21,1	17,3	+0,3 (33,3%)	-0,9 (-4%)	-0,6 (-3,4%)
3 rd generation cephalosporins DDD/100BED-DAYS	32,3	8,9	13,5	35,7	3,5	9,6	+3,4 (10,5%)	-5,4 (-60%)	-3,9 (-28,9%)
Antipseudomonal antibiotics DDD/100BED-DAYS	16,1	9,1	10,5	27,8	5,9	10	+11,7 (72,7%)	-3,2 (-35,1%)	-0,5 (-4,%)
Quinolones DDD/100BED-DAYS	2,3	3,6	3,4	10,8	1,4	3,2	+8,5 (370%)	-2,2 (-61,1%)	-0,2 (-5,9%)
Anti-MRSA antibiotics DDD/100BED-DAYS	23,4	3,4	7,3	18,6	2	5,1	-4,8 (-20,5%)	-1,4 (-41,2%)	-2,2 (-30,1%)
Antifungal treatments DDD/100BED-DAYS	4,4	1	1,6	22,9	0	4,4	+18,5 (420%)	-4,4 (-100%)	+2,8 (175%)
Total antimicrobial consumption DDD/100BED-DAYS	135,1	62,6	76,8	187,3	43,7	70,8	+52,2 (38,6%)	-18,9 (-30,2%)	-6 (-7,8%)

were previously established and taking RoB into account in the interpretation of results. The only high-quality study (5%) reported on the sources of funding for the studies included in the review and provided a list of excluded articles.

Conclusion and Relevance Systematic reviews provide the best level of evidence, but their quality must be assured. The overall quality of the systematic reviews measuring the impact of PHARMACIST-LED AMS interventions is low. There is a need for high level literature covering the participation and implication of pharmacists in AMS. The real impact of AMS is unknown to support policy makers and efficient designs in both clinical practice and research.

REFERENCES AND/OR ACKNOWLEDGEMENTS

Conflict of Interest No conflict of interest

4CPS-021 EFFECTIVENESS, PERSISTENCE, AND ADHERENCE OF BARICITINIB IN RHEUMATOID ARTHRITIS: LONG-TERM REAL-WORLD EVIDENCE STUDY

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10.1136/ejhpharm-2023-eahp.66

Background and Importance Baricitinib (BAR) is a Janus kinase inhibitor (JAKi) selective for isoenzymes 1 and 2. It is used in rheumatoid arthritis (RA) with an inadequate response to conventional synthetic disease-modifying drugs (csDMARD).

Aim and Objectives The objective was to evaluate the effectiveness, persistence, and adherence of BAR in RA in a real-world setting.

Material and Methods An ambispective observational study was designed in a third-level hospital. Patients with RA who started BAR between September 2017 and June 2021 were included and signed an informed consent. Patients participating in a clinical trial were excluded. Patients were followed up until December 2021. Effectiveness was evaluated by variation of the Disease Activity Score (28-joint count) using C-reactive protein (DAS28PCR); and by the percentage of patients achieving therapeutic target: low disease activity (LDA) (DAS28CRP \leq 3.2) or disease remission (DAS28CRP $<$ 2.6). Adherence was analysed using the 5 items Compliance-Questionnaire-Rheumatology (CQR5) applied to patients every 6 months, and the medication possession ratio (MPR). The study was approved by the Institutional Review Board of the hospital.

Results 61 patients were included, 51/61 (83.6%) were female. The mean age was 58.1 (15.4) and the mean disease duration was 13.9 (8.3) years. 47/61 (77.0%) and 43/61 (70.5%) patients presented anti-citrullinated protein antibodies and rheumatoid factor, respectively. 44/61 (72.1%) patients had prior exposure to biologic DMARDs. 10/61 (16.4%) patients were on BAR monotherapy. A significant decrease was observed in DAS28PCR from baseline to the end of treatment/follow-up (3.9 (0.9) vs 2.7 (1.3), a difference of 1.2, $p=0.000$). In addition, 6/61 (9.8%) and 37/61 (60.7%) patients achieved LDA or remission, respectively. 31/61 (50.8%) patients remained on treatment at the end of follow-up, with a median persistence of 31.3 (14.1-47.7) months. The mean MPR was 0.96 (0.08), and all but one patient were

adherent (MPR $>$ 0.8). According to the CQR5, all patients were 'good adherers'.

Conclusion and Relevance JAKi are the most recent alternative available for RA treatment. BAR demonstrated effectiveness in our study cohort, with a significant decrease in DAS28PCR, a high percentage of patients reaching the therapeutic target, and a persistence exceeding two years. Adherence to treatment was very high, almost 100%. More studies in real-world setting are needed to confirm these results.

REFERENCES AND/OR ACKNOWLEDGEMENTS

Conflict of Interest No conflict of interest

4CPS-022 ADHERENCE TO EVOLOCUMAB AND ITS IMPACT ON LDL CHOLESTEROL REDUCTION

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10.1136/ejhpharm-2023-eahp.67

Background and Importance According to the latest recommendations, the need to achieve lower cholesterol levels has become more important. Therefore, the use of protein convertase subtilisin/kexin type 9 (PCSK9) inhibitors has been increasing recently.

Aim and Objectives To establish patients' adherence to evolocumab therapy, a PCSK9 inhibitor, and to analyse the reduction of patients' LDL-C levels.

Material and Methods Descriptive retrospective observational study carried out between January and December 2021 in a third-level hospital. Patients with three or more dispensations of evolocumab were selected. The number of prefilled pens and the date when it was supplied were considered to calculate compliance. Demographics and clinical data (prescription and LDL-C values: pre-treatment, after 12 weeks, and at the end of the study) were compiled through the medical record.

Results 139 patients were included in the study, 79 males (57.25%) with a median age of 62.97 years (IQR 15.53). 73 patients (52.90%) were prescribed due to secondary prevention and the remainder due to familial hypercholesterolemia. All patients received 140 mg every 2 weeks.

Patients were divided into three groups (1, 2, and 3) according to their medication adherence (\geq 90%, 75 – 89.99%, and $<$ 75% respectively). 90 patients (65.22%) were in group 1, 30 (21.74%) in group 2 and 18 (13.04%) in group 3.

After 12 weeks of treatment, a reduction of LDL-C levels by at least 50% was observed in 71 patients (78.79%) from group 1, 23 (76.67%) from group 2, and 11 (61.11%) from group 3. The reduction percentage medians were -69.18% (IQR 26.69), -68.64% (IQR 28.89), and -54.56% (IQR 44.69) respectively for each group. Results in group 1 and 2 are better than existing literature data (table 1). Group 3 obtained worse efficacy results.

Abstract 4CPS-022 Table 1

Phase III clinical trial (N)	Reduction percentage (CI 95%)
20110114 MENDEL-2 (614)	-58 (-60, -55)
20110115 LAPLACE-2 (1896)	-64 (-66, -62)
20110117 RUTHERFORD2 (329)	-63 (-66, -59)
20110116 GAUSS-2 (307)	-57 (-61, -54)