

**Background and Importance** The prevalence of pain in post-operative patients is 88.2%, with moderate to severe pain in 19.6% of cases.

**Aim and Objectives** The objective was to describe pharmaceutical interventions in pain management and the impact on patient-reported pain on admission and discharge and patient satisfaction.

**Material and Methods** A prospective interventional study (March-May 2023) in hospitalised adult patients admitted in general or trauma surgery was carried out.

**Outcome measures** patient-perceived pain (VAS) and patient satisfaction.

**Pharmaceutical interventions were made** 48 and 96 hours after surgery (at bedside) and 48 hours after discharge (by telephone):

1. Admission:

1.1. Reminding nurses of recording VAS (one per nursing shift).

1.2. If  $VAS \geq 4$ , interventions in analgesia prescription and/or in nurse's administration

1.3 Patient education on VAS scale, therapeutic options and the importance of asking for analgesia if pain.

2. Discharge:

2.1. If  $VAS > 2$  patients were reminded how to take analgesia. If no analgesia prescribed, the patient was referred to a primary care physician (PCP).

2.2. If they took the prescribed medication and  $VAS = 4-6$ , they were referred to PCP and if  $VAS \geq 7$ , to the emergency department.

A descriptive analysis was used.

**Results** Sixty patients were included, mean age of 66.7 ( $\pm 16.4$ ) years

On admission, 94 interventions were made (92.3% accepted): to encourage VAS recording ( $n=26$ ), administer analgesia ( $n=18$ ), prescribe analgesia ( $n=18$ ), increase therapeutic step ( $n=17$ ) and patient education ( $n=15$ ).

An increase in VAS recording was observed (56.7% vs 76.3%). There was a progressive decrease in current patient-reported pain (2.1 vs 1.9 vs 1.4) and maximum pain in last 24 hours (3.2 vs 2.7 vs 2.3) and in the number of patients with  $VAS \geq 4$ .

At discharge, 39 interventions were performed: 23 patients were reminded how to take the prescribed analgesia, 15 were referred to PCP for lack of analgesia prescription or moderate pain, and one was referred to the emergency department.

Satisfaction with postoperative pain management and the pharmaceutical care was 7.9 ( $\pm 2.1$ ) and 9.7 ( $\pm 0.5$ ), respectively.

**Conclusion and Relevance** Pharmaceutical interventions on education, recording, administration and prescription of analgesics might have contributed to a gradual reduction in patient-reported pain. The pharmacist plays a role in the management of postoperative pain during admission and at discharge with high patient satisfaction.

#### REFERENCES AND/OR ACKNOWLEDGEMENTS

**Conflict of Interest** No conflict of interest.

#### 4CPS-003 EVALUATION OF CLINICAL VARIABLES IMPACT ON ENOXAPARIN DOSING AND ANTIXA CONCENTRATION

A Torrent\*, T Lizondo, C Bastida, D Soy. *Hospital Clínic de Barcelona, Pharmacy Service, Barcelona, Spain*

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**Background and Importance** Monitoring enoxaparin is not routine as per guidelines but is recommended in renal insufficiency and debated for extreme body weights and pregnancy.

**Aim and Objectives** This study aims to assess enoxaparin monitoring in hospitalised patients and identify variables that correlate with its efficacy.

**Material and Methods** A descriptive, single-centre, retrospective study was conducted. Hospitalised patients receiving therapeutic enoxaparin doses were included, with measurement of peak anti-Xa concentration between December 2021 and January 2023. Patients undergoing renal replacement therapies were excluded.

Demographic data, laboratory and clinical parameters, and enoxaparin-related details were collected. Obesity was defined as body mass index  $\geq 30$  kg/m<sup>2</sup>. Multiple linear regression was used to analyse the relationship between anti-Xa concentration and different variables including enoxaparin dose, obesity, renal impairment (ClCr < 30mL/min), and critical status. Suggested peak target range for anti-Xa is 0.5–1.1 IU/mL. STATA/BE was used to assess their correlation with Pearson coefficient and determine the best predictor.

**Results** A total of 147 patients were included, with a mean  $\pm$ SD age of 68 years ( $\pm 12.29$ ), weight of 85.03 kg ( $\pm 22.92$ ), and a BMI of 29.64 kg/m<sup>2</sup> ( $\pm 0.61$ ). Among the study population, 64 patients (43.5%) were obese, 15 (10.2%) had renal impairment, and 78 (53.1%) were critical patients. Mean  $\pm$ SD enoxaparin dose was 0.93 mg/kg ( $\pm 0.13$ ), and no significant differences were observed between obese ( $0.91 \pm 0.15$  mg/kg) and non-obese ( $0.95 \pm 0.02$  mg/kg) populations ( $p=0.104$ ). Seventy-nine patients (53.7%) presented anti-Xa concentrations out of range; 36 of them (45.6%) were obese.

In the multiple regression analysis, we observed a statistically significant effect of enoxaparin dose ( $p < 0.001$ ) and obesity ( $p=0.007$ ) in anti-Xa concentrations.

Using the final model, we found a good correlation between anti-Xa concentration and enoxaparin dose ( $p < 0.001$ ). Pearson coefficient of 0.56 was obtained for the non-obese population, while it was of 0.16 in the obese population.

**Conclusion and Relevance** In our study, we identified obesity as a variable that showed a significant effect on anti-Xa concentration. We confirmed the existence of a linear association between anti-Xa concentration and enoxaparin dose for the non-obese population. For the obese population, a poor correlation between anti-Xa concentration and enoxaparin was found suggesting the need for monitoring due to less predictable pharmacokinetics.

#### REFERENCES AND/OR ACKNOWLEDGEMENTS

**Conflict of Interest** No conflict of interest.

#### 4CPS-004 IMPACT OF INADEQUATE EMPIRICAL THERAPY ON THE MORTALITY RATE IN PSEUDOMONAS AERUGINOSA INFECTIONS

E Herranz Bayo\*, R Huarte Lacunza, MR Abad Sazatornil, I Aguiló Lafarga, CI Díaz-Calderón Horcada, A Peñas Fernández, R Bello Calvo, O Boujediane Derrous, A Miranda Marín, R Julián Martín. *Miguel Servet University Hospital, Hospital Pharmacy, Zaragoza, Spain*

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**Background and Importance** The appropriate use of antibiotics and their clinical impact is a necessary field of study to address the high incidence of resistance.

**Aim and Objectives** To analyse the impact of inadequate empirical therapy (IAT) on mortality in patients with *Pseudomonas aeruginosa* (PA) infection in a tertiary hospital.

**Material and Methods** Observational, retrospective study of patients with PA infection and treated with previous empirical antipseudomonal antibiotics from 1 January 2021 to 31 October 2021. Variables: gender, age, place of admission, dosing regimen, primary focus of infection and mortality during admission or 30 days after discharge. Definition of IAT: non-adherence to the local guidelines that establish the new EUCAST 2021 dosing criteria to achieve sufficient levels of antibiotics reported as 'sensitive with increased exposure' and which, based on the prevalence of multi-resistance in PA, recommends empirical use with biotherapy until the antibiogram is available. Data source: pharmacotherapeutic management softplante (Farmatools®) and electronic medical records. Analysis with SPSS Statistics21®

**Results** 92 patients were admitted to ICU and 126 to non-ICU (men 67.4% and 69.8% respectively) with a mean age of 62.9±12.5 years in ICU and 71.4±15.3 in non-ICU.

In the ICU the main source of infection was the lung (48.9%), while in the non-ICU the lung and urinary tract were at the same level (29.4% each).

In both groups the use of  $\beta$ -lactams (76.8% ICU and 65.7% non-ICU), followed by aminoglycosides in the ICU (13.5%) and quinolones in the non-ICU (22.5%). The use of monotherapy was higher in the non-ICU than in the ICU (66.9% vs. 49.2%,  $p<0.001$ ).

The IAT was higher in the non-ICU (67.5% vs. 47.8% ICU  $p=0.041$ ). In non-ICU, the mortality rate during admission or at 30 days in patients with IAT was 22.4% vs 7.3% with adequate empirical therapy (OR: 3.64; 95% CI 1.01–13.13), this difference being statistically significant. In ICU there were also higher mortality rates in the IAT group (50.0% vs 39.6%), but without statistically significant differences (OR:1.53; 95% CI 0.67–3.49).

**Conclusion and Relevance** The higher mortality observed in cases of IAT implies the need to work on the adequacy of dosage according to EUCAST criteria and to promote bitherapy until the antibiogram is available.

## REFERENCES AND/OR ACKNOWLEDGEMENTS

**Conflict of Interest** No conflict of interest.

### 4CPS-005 DRUG PERSISTENCE OF JAK INHIBITORS COMPARED TO BIOLOGIC DRUGS IN REAL-WORLD PRACTICE IN PATIENTS WITH RHEUMATOID ARTHRITIS

<sup>1</sup>P Llopis-Salvia\*, <sup>1</sup>M Saez-Bello, <sup>1</sup>D Viedma-Rama, <sup>1</sup>M Hermenegildo-Caudevilla, <sup>2</sup>JJ Alegre-Sancho, <sup>1</sup>M Climente-Marti. <sup>1</sup>Hospital Universitario dr Peset, Pharmacy, Valencia, Spain; <sup>2</sup>Hospital Universitario dr Peset, Rheumatology, Valencia, Spain

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**Background and Importance** JAK-inhibitors (JAKi) represent an effective choice for patients diagnosed with rheumatoid arthritis (RA). There is limited data available on real use of JAKi.

**Aim and Objectives** To compare persistence of JAKi, TNF- $\alpha$  inhibitor(TNFi) and non-TNF- $\alpha$  inhibitor(non-TNFi) drugs in patients with RA and reasons for treatment discontinuation.

**Material and Methods** An ambispective, observational study conducted at a tertiary hospital. Patients diagnosed with RA evaluated at the Rheumatology Interdisciplinary Committee of Biological Drugs from 1 January 2018 to 7 January 2022 that

started or switched treatment with JAKi, TNFi and non-TNFi were included. Treatments previously received were included. Follow-up was carried out until 7 January 2023.

Variables collected were age, sex, type of drug, prior biologics (naïve, second-line and third- or higher line), patient's chronicity level according to the Chronicity Strategy of Valencian Community (0 =healthy individual to 4 = chronic patient of high complexity), length of treatment and reasons for discontinuation.

Outcome variable was percentage of treatments that reached 12 months persistence estimated from the first to the last drug dispensation.

Data were collected from the electronic health and pharmacy dispensing records.

Continuous variables were expressed as mean (SD), and categorical variables as absolute and relative frequency. Chi-square test and logistic regression were used to identify variables associated with persistence. Statistical significance was set at  $p<0.05$ . Analysis was carried out with R-4.3.1.

**Results** There were a total of 303 patients (75% women), mean age was 53 (16) years. We recorded 623 treatments: JAKi 156 (25.0%), TNFi 326 (52.4%) and non-TNFi 156 (22.6%).

Chronicity level ( $n=177$  (58.4%) patients) was: '0' 40 (11.7%), '1' 143 (41.7%), '2' 109 (31.8%), '3' 51 (14.8%). Treatment line: first 284 (45.6%), second 146 (23.4%) and third or higher 193 (31.0%).

No difference in persistence was found among JAKi 108 (69.2%), TNFi 215 (66%) and non-TNFi 80 (56.7%) treatments ( $p=0.06$ ). Treatment line showed persistence differences: naïve 213 (75%), second-line 81 (55.5%) and third -or higher 109 (56.5%) ( $p<0.01$ ). No difference was found in persistence according to sex, age or chronicity level. Multivariate analysis confirmed these results.

At the end of follow-up 460 (73.8%) treatments had finished due to: 199 (43.3%) secondary failures; 100 (21.7%) adverse effects; 74 (16.1%) primary failures and others 50 (18.9%). No differences were found among according to type of therapy ( $p=0,48$ ).

**Conclusion and Relevance** In our hospital 12-months' persistence and reasons for discontinuation among JAKi, TNFi and non-TNFi in patients with RA showed no difference.

## REFERENCES AND/OR ACKNOWLEDGEMENTS

**Conflict of Interest** No conflict of interest.

### 4CPS-006 ADHERENCE TO NEBULISED ANTIBIOTICS IN CYSTIC FIBROSIS PATIENTS AFTER STARTING ELEXACAFTOR/TEZACAFTOR/IVACAFTOR

<sup>1</sup>F Martínez de la Torre\*, <sup>2</sup>L Diab Caceres, <sup>1</sup>B Bertran De Lis Bartolome, <sup>1</sup>M Gonzalez sevilla, <sup>1</sup>MD Canales Siguero, <sup>1</sup>MDC Jimenez Leon, <sup>1</sup>F Mayo Oliveira, <sup>1</sup>A Castro Frontiñan, <sup>1</sup>A Gonzalez Gomez, <sup>1</sup>JM Ferrari Piquero. <sup>1</sup>Hospital Universitario 12 de Octubre, Pharmacy, Madrid, Spain; <sup>2</sup>Hospital Universitario 12 de Octubre, Pneumology, Madrid, Spain

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**Background and Importance** Elexacaftor/tezacaftor/ivacaftor (ETI) are bringing about a major change in the treatment of cystic fibrosis (CF) patients. However, continuing with other treatments such as nebulised antibiotics is necessary.

**Aim and Objectives** To assess the adherence to inhaled antibiotics before and after starting ETI. Secondary objectives: To assess effectiveness of ETI.