Fluoroquinolone and quinolone antibiotics reported in these ADRs were mainly used for urinary tract infections (40.9%) and respiratory tract infections (31.8%).

Conclusion On 5 October 2018, the European Medicines Agency PRAC recommended restricting the use of fluoroquinolone and quinolone antibiotics[2] (used by mouth, injection or inhalation), that will become applicable only after the decision of the Committee for Medicinal Products for Human Use. In the meantime, this work could help in make the healthcare professionals aware of a range of possible side effects (apart from achilles tendon disorders) attributable to fluoroquinolone and quinolone antibiotics, and that could be life-changing and wide ranging.

REFERENCES AND/OR ACKNOWLEDGEMENTS

1. EMA Quinolone and fluoroquinolone Article 31 referral – Notification. Available at https://www.ema.europa.eu/documents/referral/quinolone-fluoroquinolone-article-31-referral-notification_en.pdf (accessed 15 October 2018.)
2. EMA Quinolone and fluoroquinolone Article 31 referral – Recommendation provided by PRAC. Available at https://www.ema.europa.eu/documents/referral/quinolone-fluoroquinolone-article-31-referral-recommendation-provided-prac_en.pdf (accessed 15 October 2018.)

No conflict of interest.

5PSQ-032 ADMINISTRATION PROTOCOL FOR PENICILLIN G IN A PATIENT WITH A SEVERE REACTION TO BETALACTAMS AND ABDOMINAL ACTINOMYCOSIS

[1]E Izquierdo*, [1]A Lazaro-Cebas, [1]A Carreño-Ocaña, [2]N Blanca-Lopez, [2]FJ Ruano-Perez, [1]A Such-Diaz, [1]P Tejedor-Prado, [1]EA Alvaro-Alonso, [1]A Santiago-Perez, [2]MG Canto-Diez, [1]I Escobar-Rodriguez. *[1]Infanta Leonor Hospital, Pharmacy, Madrid, Spain; [2]Infanta Leonor Hospital, Allergology, Madrid, Spain*

10.1136/ejhpharm-2019-eahpconf.465

Background Penicillin G 20 MIU/day for 4–6 weeks followed by oral amoxicillin for 6–12 months is the first option of treatment for abdominal actinomycosis where other therapies have less effectiveness.

Purpose To describe a desensitisation protocol for Penicillin G in a patient with abdominal actynomicosis that had experienced a severe anaphylactic reaction (tachycardia, redness, bronchospasm and refractory hypotension) to ceftriaxone that required a perfusion of noradrenalina, in addition to adrenaline, corticosteroids and salbutamol for recovering.

Material and methods Penicillin G vials were reconstituted with water for injection as indicated on its label and they were diluted with 0.9% sodium chloride to make four mother solutions (0.1 mg/ml, 1 mg/ml, 10 mg/ml and 100 mg/ml of δ-lactamic). Doses were prepared in syringes. Initial dose was 16 IU, with subsequent syringes elaborated doubling the dose until a cumulative dose of 5 MIU. A total of 19 syringes were prepared in a horizontal laminar flow cabinet in the pharmacy service: dilution 0.1 mg/ml (160 IU/ml): 16 IU/0.1 ml, 32 IU/0.2 ml, 64 IU/0.4 ml and 128 IU/0.8 ml. Dilution 1 mg/ml (1,600 IU/ml): 240 IU/0.15 ml, 480 IU/0.3 ml, 960 IU/0.6 ml and 1,600 IU/1 ml. Dilution 10 mg/ml (16,000 IU/ml): 3,200 IU/0.2 ml, 6,400 IU/0.4 ml and 12,800 IU/0.8 ml. Dilution 100 mg/ml (160,000 IU/ml): 24,000 IU/0.15 ml, 48,000 IU/0.3 ml, 96,000 IU/0.6 ml, 16,000 IU/1 ml, 320,000 IU/2 ml, 640,000 IU/4 ml, 1,280,000 IU/8 ml and 2,400,000 IU/15 ml.

Results Due to the high risk of the patient, despite negative allergological tests, a desensitisation protocol was administrated by allergists in the intensive care unit with monitoring and cardiopulmonary resuscitation equipment. The time interval between each syringe was 10 min in direct bolus, the last three doses were administered during 10–15 min due to the higher doses and infusion pain. The schedule was achieved without any reaction. After this, a whole dose of 5 MUI/6 hours was administered during 2 months without any adverse reaction.

Conclusion This desensitisation protocol can be useful for penicillin-allergic patients without alternative treatment options.

REFERENCES AND/OR ACKNOWLEDGEMENTS

Dávila González IJ, Sociedad Española de Alergología e Inmunología Clínica. Tratado de alergología. 2nd Ed. Vol. 2. Majadahonda: Ergón; 2016.

No conflict of interest.

5PSQ-033 EFFECTIVENESS OF COMPUTERISED DECISION SUPPORT SYSTEM-BASED INTERVENTION IN ANTIMICROBIAL USE: THE HIGEA PROJECT

[1]CG Rodriguez-Gonzalez*, [1]E Chamorro-de Vega, [1]S Ibañez-Garcia, [1]ML Martin-Barbero, [2]JL de la Rosa, [1]A Herranz-Alonso, [1]M Sanjurjo-Saez. *[1]Hospital General Universitario Gregorio Marañon. Instituto de Investigacion Sanitaria Gregorio Marañon, Pharmacy, Madrid, Spain; [2]Yerbabuena Software, It Department in Information System, Malaga, Spain*

10.1136/ejhpharm-2019-eahpconf.466

Background Clinical decision support systems (CDSS) can play an important role in facilitating antimicrobial stewardship programmes (ASP). However, the effects of CDSS in improving antimicrobial therapy have been insufficiently studied.

Purpose To evaluate the impact of an automated/integrated real-time CDSS called HIGEA for antimicrobial stewardship-related interventions.

Material and methods This was a prospective descriptive study performed in a 1300-bed tertiary teaching hospital in Madrid.

A CDSS was developed integrating microbiology data, laboratory data and the computerised prescription order system. The integration was performed using a standard language (HL7). The system generates alerts based on predefined clinical rules (CR) to select patients in whom antimicrobial therapy can be improved. Alerts are reviewed daily by an infectious disease pharmacist, who makes recommendations of the necessary changes on the treatment to the physician.

Eight custom-built CR that promote stop/de-escalation of therapy were evaluated in the initial ASP review during 1 April 2017–31 August 2017. Data collection included total number of actionable alerts, recommendations provided and acceptance rates. For each CR, the positive predictive value (PPV) was calculated as the ratio of modifications in treatment to alerts reviewed. The severity of medication errors prevented and antimicrobial consumption were also analysed.

Results In total, 701 alerts were reviewed during the study period (6.4 alerts per day). Overall, 419 (60%) alerts were actionable. The acceptance rate was 77% (321/419) and the PPV 0.46. The CR that induced the highest number of treatment changes was 'treatment with penicillins/cephalosporins/quinolones>7 days' (PPV=0.58), followed by 'switch to oral therapy with quinolones/linezolid/azole' (PPV=0.31), 'Streptococcus/Enterococcus+carbapenem' (PPV=0.70) and 'candin +fluconazole sensitive *Candida* (PPV=0.82).

Accordingly, the most common interventions were discontinuation of treatment (60%), switch to oral therapy (20%) and de-escalation (12%). Overall, 14% of errors intercepted were classified as being of moderate severity and 9.4% as serious. A significant reduction in the consumption of quinolones was achieved (from 15.0 to 12.6 defined daily doses/100 patient-days), with no significant change in the consumption of other antibiotics.

Conclusion HIGEA has identified opportunities to optimize antimicrobial use. Future work must aim to incorporate new custom-built clinical rules, including those to alert the need for prompt initiation of antimicrobial therapy.

REFERENCES AND/OR ACKNOWLEDGEMENTS

Hosp Pharm 2017;**52**:679–84.

No conflict of interest,

5PSQ-034 LINEZOLID AND SEROTONIN SYNDROME

[1]R Seisdedos*, [2]P Lopez. [1]*Hospital Universitario Puerto Real, Farmacia, Puerto Real, Spain*; [2]*Hospital de Tomelloso, Farmacia, Tomelloso, Spain*

10.1136/ejhpharm-2019-eahpconf.467

Background Serotonin syndrome (SS) is a potentially life-threatening clinical condition associated with the use of drugs that promote serotonergic neurotransmission. It is characterised by mental, autonomic and neuromuscular symptoms. Incidence is unknown and it is frequently underdiagnosed.

It is unknown how to predict who will develop it, so combinations of serotonergic agents should be avoided. It is essential to maintain a high clinical suspicion and knowledge of medications that can cause it. In 2016, the FDA issued a statement that included a list of drugs that increase serotonin. One of these drugs is linezolid, an antibiotic that is not usually associated with serotonergic effects.

Purpose Study frequency and relevance of this interaction between linezolid and serotonergic agents.

Material and methods Retrospective study of patients admitted under treatment with linezolid during 2017. Pharmacotherapeutic histories were analysed for all patients who received treatment with linezolid in electronic prescribing software (Farmatools). In those patients in whom concomitant use of serotonergic agents was detected, clinical histories were checked to see if they had been diagnosed with SS.

Results We found 77 patients treated with linezolid, 11 (14%) had concomitant prescriptions with serotonergic agents. In no case were more than two serotonergic drugs used at the same time. The most frequent interaction was with fentanyl (36%), followed by tramadol (27%): other less frequent were pethidine, sertraline, venlafaxine and citalopram. By therapeutic group, the most frequent interaction was with opioids (72% of patients with interaction), the rest with antidepressants. In no case was SS diagnosed.

Conclusion The number of patients with concomitant prescriptions of serotonergic agents was low and for most of them, risk was acceptable due to the lack of a therapeutic alternative. The incidence of SS can not be determined by the reduced data, although it can be estimated as low, since no case has been presented. The likelihood of experiencing SS has increased in recent years as a result of the extensive use of drugs with serotonergic actions. However, it is possible that it occurs more frequently with other medications, since linezolid is an antibiotic for hospital use and usually restricted, which requires the validation of a pharmacist, who can detect this type of interaction.

REFERENCES AND/OR ACKNOWLEDGEMENTS

https://www.ncbi.nlm.nih.gov/pubmed/24358002

http://www.fda.gov/Drugs/DrugSafety/ucm489676.htm

https://www.ncbi.nlm.nih.gov/pubmed/16652315

No conflict of interest.

5PSQ-035 ANALYSIS OF THE MEDICATION TREATMENT OF COMMUNITY-ACQUIRED PNEUMONIA TREATED IN THE COMMUNITY AND HAVING RESULTED IN HOSPITALISATION

[1]C Trouilleux*, [2]H Faure, [1]H Poujol, [3]C Lechiche, [1]G Leguelinel-Blache, [3]A Sotto. [1]*CHU Carémeau, Pharmacie, Nîmes, France*; [2]*CH Cognac, Pharmacie, Cognac, France*; [3]*CHU Carémeau, Service De Maladies Infectieuses et Tropicales, Nîmes, France*

10.1136/ejhpharm-2019-eahpconf.468

Background Acute community-acquired pneumonia (CAP) is a widespread infection worldwide, causing many hospitalisations and deaths. The repeated and inappropriate use of antibiotics is the main cause of the emergence of bacterial resistance that can lead to therapeutic dead ends.

Purpose This study assessed the pharmacological management of CAP in community and hospital settings, according to the applicable national standards (NS).

Material and methods This was a retrospective and observational study, performed over 1 year in 13 short-stay wards in a 2,000-bed health facility. The patients included had a CAP previously treated in the community, knowing that each patient could be treated with one or more antibiotic strategies. Two infectious physicians and a senior clinical pharmacist analysed the compliance of antibiotic orders to NS for the medication choice (M), the medication dosage (P) and the treatment duration (D).

Results A total of 204 patients were included. The rates of patients with at least one non-compliance were 67.9% and 45.9% respectively in the community (n=187 patients) and hospital (n=181). The antibiotic therapies were non-compliant to NS for 44.5% on M (n=238 antibiotic therapies), versus 33.2% (n=226) respectively in the community and hospital, 20.6% on P (n=218) versus 4.9% (n=226) and 30.6% on D (n=206) versus 19.0% (n=216). In the emergency department (n=47), 23.8% and 6.1% of antibiotic orders were non-compliant for M and P, respectively.

Other works published in the literature on the rate of intra-hospital nonconformities present results similar to ours. This innovative study (hitherto never performed in the outpatient sector in France) reminds us of the importance of respecting the recommendations for optimal recovery of patients with CAP, avoiding multiple re-hospitalisations and preserving the efficacy of the existing antibiotic arsenal.

Conclusion Non-compliance to NS for antibiotic therapies can be explained by the multiplicity of prescribers, a lack of communication, a difficult access to clinico-therapeutic recommendations, microbiological information and medical imagery tests.