4CPS-127 PHARMACOKINETIC MONITORING OF VANCOMYCIN, GENTAMICIN AND AMIKACIN IN PAEDIATRIC POPULATION

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Background and Importance The aim of pharmacokinetic monitoring is to improve clinical outcomes. A protocol was agreed between the paediatric and the pharmacy services to establish an initial dosage in this population to reach a therapeutic benefit.

Aim and Objectives To evaluate the initial dosage of these antibiotics by carrying out pharmacokinetic monitoring.

Material and Methods Retrospective observational study from May 2020 to May 2022, including patients treated with vancomycin, gentamicin, or amikacin from the paediatrics service aged <1 year. The following variables were collected at Orion Clinic®: data on age(postnatal, gestational), weight, and dosage. The pharmacokinetic results, creatinine, and pharmaceutical recommendation were collected from Gestlab®.The optimal trough intervals established in the protocol for vancomycin, gentamicin, and amikacin were 10-15 mcg/mL, 0.5-1.5 mcg/mL, 2-5 mcg/mL, and the dosage according to postnatal and gestational age were 10-12mg/kg/8h, 2.5-4mg/kg/24h, 15mg/kg/24-48h, respectively.

Results 231 patients were analysed, 50 treated with vancomycin, 169 with gentamicin and 12 with amikacin. The mean weight was 2.58kg, 2.52kg, and 1.79kg for vancomycin, gentamicin, and amikacin, respectively. Regarding gestational age (GA), in the vancomycin group 22 patients <29weeks, 23 between 30-36, and 5 >37 weeks. For gentamicin, the GA was <29 weeks in 25 patients and >29 weeks in 144. The GA in the amikacin group was <30 weeks in 7 patients, between 30-34 weeks in 4, and >35 weeks in 1 patient. For vancomycin, 58% of patients were treated for suspected sepsis, while gentamicin and amikacin were started empirically in 100% of cases. The initial dosing regimen was in line with the protocol in 86%, 94% and 67% patients for vancomycin, gentamicin and amikacin, respectively. After the first monitoring, 30% patients treated with vancomycin were within the target range, 63% in the case of gentamicin, and 33% for amikacin. A second monitoring was performed, after dosage individualisation, in 35, 19 and6 patients, of vancomycin, gentamicin and amikacin, reaching the objective in 49%, 68% and 67%, respectively.

Conclusion and Relevance In most patients, the initial dosage of the three antibiotics was adjusted to the hospital protocol. A high number of patients treated with vancomycin required dose adjustment, in contrast with gentamicin and amikacin. The role of the pharmacist, together with pharmacokinetic monitoring, is appreciated to achieve optimal concentrations.

REFERENCES AND/OR ACKNOWLEDGEMENTS

Conflict of Interest No conflict of interest

4CPS-128 CLINICAL PRACTICE: ANTI-VEGF THERAPY FOR RESISTANT MACULAR OEDEMA

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Background and Importance Therapy approved for diabetic macular oedema (DME) are intravitreal ranibizumab (IR), intravitreal aflibercept (IA) and dexamethasone intravitreal (ID). Currently there is a gap of information on its use in unresponsive to previous treatment.

Aim and Objectives To evaluate clinical effectiveness and safety of aflibercept or ranibizumab (Anti-VEGF) therapy for resistant macular oedema.

Material and Methods An observational retrospective study of all patients with DME unresponsive to previous anti-VEGF therapy from September 2021 to September 2022. Clinical data were obtained from digital clinical history and the prescription software: sex, aged, pathology, previous therapy, type treatment, number injections during study, response and adverse events (AE).

Effectiveness was determined by complete or partial response. Complete response was defined as maintenance of visual acuity (VA) reduction of subretinal fluid and inflammatory activity. Secondly, partial response was considered if only one of these parameters was observed. In terms of safety, adverse events (AE) were recorded.

Results Thirty-four patients, 53% women (n=18), were included, with an average aged of 69 (35-90) years. The population was patients diagnosed with resistant macular oedema. Almost all patients received treatment with one-line anti-VEGF therapy (80% aflibercept, 20% ranibizumab), only one patient received treatment with two lines anti-VEGF (bevacizumab and ranibizumab). During the study, 261 injections of IR (median 9, range 3-12) were administered into 32 eyes corresponding to 27 patients and 35 injections of IA (median 5, 2-7) were administered into 9 eyes corresponding to 7 patients. 12% (n=4) for patients who received combined therapy with ID. Complete response was observed in 27% patients (n=9), partial response in 26% (n=8) and non-response 47% (n=17).

No treatment-associated adverse effects were observed.

Conclusion and Relevance

- The effectiveness was relatively low in unresponsive to previous treatment. Future controlled trials are needed to confirm the use of this type of treatments in unresponsive patients.
- The safety profile for use of the therapy showed it was tolerated.

REFERENCES AND/OR ACKNOWLEDGEMENTS

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