

it emerged that the impact on budget was greater for nivolumab which had a higher survival value than pembrolizumab. This analysis was a first step in assessing the impact of introducing a significant new class of treatments, immunotherapy, comparing two drugs that have totally changed the prognosis of NSCLC patients.

REFERENCES AND/OR ACKNOWLEDGEMENTS

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Conflict of interest No conflict of interest

5PSQ-153 CARBOPLATIN AUC DOSING IN PAEDIATRIC PATIENTS: INFLUENCE OF GLOMERULAR FILTRATION RATE MEASUREMENT

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Background and importance In paediatrics, some carboplatin dosage methods are based on renal clearance. An accurate determination of the glomerular filtration rate (GFR) can be obtained by measuring 51Cr-EDTA clearance but this method is laborious and difficult, especially in children. Hence various formulae have been developed to calculate and estimate GFR.

Aim and objectives The aim of this study was to compare carboplatin doses calculated by the modified Calvert formula with GFR measured by 51Cr-EDTA clearance and GFR estimated with the Schwartz formula in children.

Material and methods All paediatric cancer patients whose GFR was measured by 51Cr-EDTA were included. GFR was also estimated with the Schwartz formula. Demographics of the patients included in the study were collected. To calculate carboplatin dose, the modified Calvert formula was used: dose (mg/m²) = target AUC × (raw GFR (mL/min) + 15 × body surface area (BSA) (m²)). The target AUC chosen was 5 mg/mL/min. Carboplatin doses were calculated with two different values of GFR calculated previously. To test normality, the Kolmogorov–Smirnov test was used. The Student's t test for paired samples was applied to compare carboplatin mean doses.

Results 33 patients were identified with a median age of 10 years (range 1–17), 63.63% were male. Median weight, height and BSA were 28 kg (range 8–84.4 kg), 137 cm (range 64–182 cm) and 1.04 m² (range 0.37–2.06 m²), respectively. The mean carboplatin dose calculated with GFR measured by 51Cr-EDTA was 274.28±135.74 mg and with GFR estimated with the Schwartz formula, 364.86±156.59 mg. The mean difference between the two dosing methods was 90.58 mg (p<0.001).

Conclusion and relevance Carboplatin doses calculated with GFR estimated by the Schwartz formula were statistically higher than those measured by 51Cr-EDTA. This variability may be a risk factor leading to inadequate dosing of patients treated with carboplatin. GFR measured with 51-Cr-EDTA is considered the gold standard. Therefore, it should be implemented in all centres where carboplatin is given to paediatric patients.

REFERENCES AND/OR ACKNOWLEDGEMENTS

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5PSQ-154 DETERMINATION OF GENETIC POLYMORPHISMS OF THE DIHYDROPYRIMIDINE DEHYDROGENASE GENE IN REAL CLINICAL PRACTICE AS PREDICTORS OF SEVERE FLUOROPYRIMIDINE ASSOCIATED TOXICITY

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Background and importance Fluoropyrimidines are antineoplastic drugs used for the treatment of many types of solid tumours. Approximately 80–90% administered is metabolised by the enzyme dihydropyrimidine dehydrogenase (DPYD). Partial or total deficiency of this enzyme is related to severe toxicity and in some cases it can cause the death of the patient.

Aim and objectives The aim of our study was to determine the frequency of these polymorphisms in the DPYD gene in patients treated in our hospital, and to identify those patients with a predisposition to excessive toxicity if they are exposed to fluoropyrimidines.

Material and methods Genetic analysis of the DPYD gene was performed on all patients who started treatment with fluoropyrimidines between September 2017 and April 2020. The variables collected were: age, type of tumour diagnosed and toxicity presented in the first six treatment cycles according to the common terminology criteria for adverse events (CTCAE) classification. Data were obtained from the electronic medical records (Diraya) and the electronic prescription programme (Farmis). The polymorphisms studied were rs3918290, rs55886062, rs67376798 and rs56038477.

Results Genetic analysis was performed on 171 patients. Median age was 71 years. Most of the diagnoses corresponded to colorectal cancer (81%). Patients presented the following adverse events: digestive toxicity in 59% of patients (CTCAE: 1, 2, 3), mucositis 20% (CTCAE: 1, 2), haematological toxicity 17% (CTCAE: 2), hepatotoxicity 6% (CTCAE: 2, 3), neuropathy 16% (CTCAE: 1, 2) and erythrocytosis 10% (CTCAE: 1, 2, 3). 42% of patients required drug withdrawal or dose reduction due to toxicity. Regarding the results of the polymorphisms studied, 95.3% presented a wild-type genotype for the analysed variants. 4.7% of patients presented with some mutated allele (heterozygote): three patients for rs3918290, three patients for rs67376798 and two patients for rs56038477, coinciding with the patients who presented greater toxicity.

Conclusion and relevance The heterozygous patients detected were at risk of developing severe toxicity when they were treated with fluoropyrimidines and they required dose adjustment of these drugs. The use of these pharmacogenetic tools for the determination of polymorphisms of the DPYD gene in routine practice allows us to predict the potentially serious toxicity, favouring the individualised use of these drugs.

REFERENCES AND/OR ACKNOWLEDGEMENTS

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