ASSOCIATION OF DIHYDROPYRIMIDINE DEHYDROGENASE DEFICIENCY WITH CAPECITABINE TOLERANCE

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Background and importance

- Dihydropyrimidine dehydrogenase (DPD) is the first of enzymes in fluoropyrimidine metabolic pathway.
- Patients with partial or total deficiency in DPD activity cannot adequately degrade fluoropyrimidines, increasing the risk of serious toxicity.

Aim and objectives

To assess the rate of deficiency of the metabolizing enzyme DPD in our population and describe the management of these patients in clinical practice.

Material and methods

Patients diagnosed with colorectal cancer receiving capecitabine

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Variables: Age, gender, Eastern Cooperative Oncology Group (ECOG), regimen treatments and number of cycles, doses reduction, adverse events (AEs), and withdrawal treatments

Mutated allele heterozygote in 11.4% of patients
- rs67376798 (8.6%)
- rs56038477 (2.9%)

Results

- 35 patients
- 24 men (68.6%) and 11 women (31.4%)
- ECOG 0-1
- Treatment:
  - Oxaliplatin+capecitabine in 74.3%
  - Capecitabine in 25.7%
- 50% dose reduction was prescribed initially

AEs → 100% in patients with DPD mutation and 41.9% in patients without DPD mutation

- Nausea (25.7%), constipation (14.3%), diarrhoea (11.4%) and vomiting (11.4%)

Conclusion and relevance

- Patients with DPD polymorphisms in our population completed treatment with 50% of the dose.
- AE were more prevalent in DPD mutation group. Determination of variants of DPD can help avoid serious or fatal EA.