ASSOCIATON OF DIHYDROPYRIMIDINE DEHYDROGENASE DEFICIENCY WITH CAPECITABINE TOLERANCE

4CPS-035

L01- ANTINEOPLASTIC AGENTS

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BACKGROUND

Dihydropyrimidine dehydrogenase (DPD) is the first of the enzymes in the fluoropyrimidine metabolic pathway. Recently, the **Spanish Agency of Medicine and Health Products** reported an **informative note** warning that patients with partial or total deficiency in DPD activity cannot adequately degrade fluoropyrimidines, increasing the risk of **serious toxicity.** DPD genotyping is recommended as standard practice for predicting the occurrence and severity of capecitabine toxicity.

AIM AND OBJETIVES

To assess the rate of deficiency of the metabolising enzyme DPD in patients treated with capecitabine and to describe the associated toxicity.

MATERIAL AND METHODS

- Observational and retrospective study
- Data collected: Age, gender, Eastern Cooperative Oncology Group (ECOG) and diagnosis

Variants of DPD

Pharmacogenomics analysis
(Polymerase Chain Reaction technique)

Polymorphisms

rs3918290	rs55886062	rs67376798	rs56038477

RESULTS

36 patients were included. Median age 70.9 (50–88) years. ECOG 0–1 was observed in 94% of cases.

DIAGNOSIS

- **Colorectal cancer (n=22, 61%)**
- **Gastric cancer (n=9, 25%)**
- **Breast cancer (n=5, 14%)**

Most common AE

- Weakness (n=18, 50%)
- Diarrhea (n=17, 47.2%)
- Gastrointestinal (n=10, 27.8%)
- Dactylitis (n=8, 22.2%)
- Mucositis (n=8, 22.2%)
- Paresthesia (n=8, 22.2%)
- Hyperpigmentation (n=6, 16.7%)
- Constipation (n=4,11.1%)

DPD genotyping was performed on 25 patients (69%)

Without DPD mutation	With DPD mutation
Dose reduction was required in 8 (32%) patients	Mutated allele heterozygote was detected in 3 (8.3%) patients

rs56038477 (n=2, 5.5%)
rs67376798 (n=1, 2.8%)

All patients with DPD mutation and 20 (80%) without DPD mutation presented AE

CONCLUSIONS AND RELEVANCE

It is important to know the DPD polymorphism to correctly **adjust the capecitabine dose**. A **considerable percentage** of patients without **DPD mutation** report AE. Determination of variants of DPD can help avoid serious or fatal EA.

QR Code