Abstract

ATC code: 2

CASE REPORT OF SEVERE HYPERBILIRRUBINEMIA IN A PATIENT CARRYING POLYMORPHISMS IN CES1P1, CDA, SLC22A7 AND ENOSF1 TREATED WITH FLUOROPYRIMIDINES

BACKGROUND AND IMPORTANCE

Capecitabine (Xeloda®) is an oral fluoropyrimidine used for the treatment of colorectal neoplasms. Common adverse drug reactions (ADRs) during capecitabine monotherapy are gastrointestinal toxicity, hand-foot syndrome and asthenia. Hematological toxicity and hyperbilirubinemia (HB) are also frequently reported. Currently, the genotyping of 4 DPYD variants is a standard practice for the prediction of capecitabine toxicity occurrence and severity. However, numerous studies showed that other genes present in the pharmacokinetics and pharmacodynamics pathway of capecitabine may also be related with toxicity.

AIM AND OBJECTIVES

To describe a severe HB case on a 63-year-old woman under capecitabine treatment with DPYD normal metabolizer status and genetic variants in CES1P1, CDA, SLC22A7 and ENOSF1.

MATERIAL AND METHODS

Retrospective case report
Clinical data obtained from patient records
Capecitabine/HB causal relationship was assessed using Naranjo algorithm.
Genetic variants analyzed by RT-PCR with TaqMan® probes

RESULTS

- Case description:
  60-year-old woman diagnosed with stage IIIB rectal mucinous adenocarcinoma
  Neoadjuvant radiotherapy + capecitabine
  After 1st cycle G2 Diarrhea and leukopenia G3 HB suspension
  After tumor resection surgery Adjuvant capecitabine after DPYD normal status verification and bilirubin monitoring HB After 7 days G3 HB suspension
  Naranjo’s Algorithm:
  Capecitabine/HB causal relationship PROBABLE
  Exploratory genotyping of >20 genes previously associated with capecitabine toxicity:
  CES1P1 SLC22A7 CDA ENOSF1

CONCLUSION AND RELEVANCE

This case suggests that capecitabine toxicity may be influenced by other genetic variants involved in drug pharmacokinetics and pharmacodynamics beyond DPYD. However, prospective studies are required to validate these findings.

Keywords: Fluoropyrimidines, Polymorphisms, Toxicity, Case Report

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Abstract Number: 4CPS-059
ATC code: 2