Identification of pharmacological interactions between IVACAFTOR/TEZACAFTOR/ ELEXACAFTOR and dietary supplements/herbs in patients with cystic fibrosis in an outpatient pharmaceutical care unit

Gómez-Ganda L[1], Fernández-Polo A[1], García-Palop B[1], Vancells-Luján P[1], Cáceres-Gala F[1], Traversi L[2], Álvarez-Fernández A[2], Gorgas-Torner MQ[1]

[1]Pharmacy Department. Vall d'Hebron Barcelona Hospital Campus. [2]Cystic Fibrosis Unit. Pulmonology Department. Vall d'Hebron Barcelona Hospital Campus.

Contact data: laura.gomez@vallhebron.cat

Background and importance

IVA, TEZ and ELX
CYP3A4/5 substrates

TEZ and ELX
P-glycoprotein substrates

Dietary supplements and/or herbs use in complex chronic patients: **60-85%** (Spain, 2021)

It is essential to **review possible drug interactions (DIs) between IVA/TEZ/ELX with drugs, dietary supplements or herbs**

IVA: ivacaftor, TEZ: tezacaftor, ELX: elexacaftor

Aim and Objectives

Identification and evaluation of possible **DIs between IVA/TEZ/ELX and dietary supplements and/or herbs** in CF adult patients

Materials and Methods

Prospective interventional study conducted between December 2021 – March 2022

Inclusion criteria: CF adult patients who started IVA/TEZ/ELX.
Following Outpatient Pharmaceutical Care Unit protocol, a **first structured pharmaceutical care (PC) visit** was conducted at the start of IVA/TEZ/ELX to inform about dosage, administration, DIs, precautions, and adverse reactions.

Variables: biodemographic data, *F508del* mutation, previous CFTR* modulators, dietary supplements and/or herbs use.

** CFTR: cystic fibrosis transmembrane conductance regulator*

Results

n = 104, 53 ♀ and 51 ♂

Median age 28,3 (21,9 – 36,7) years

Heterozygous *F508del* mutation: n = 65

Previous CFTR modulators:
- IVA: n = 1
- IVA/TEZ: n = 48
- IVA/TEZ/ELX: n = 13**

*** Inclusion in clinical trial or managed access programs*

14 (13,5%) patients (9 ♀ and 5 ♂, median age 35.1 (22.1 – 40.0) years) took dietary supplements and/or herbs at the start of IVA/TEZ/ELX

- **Possible CYP3A4/5 DIs** (*Silybum marianum, Curcuma longa, Hypericum perforatum, Bacopa Monnieri, Ginkgo biloba, Citrus aurantium and Vaccinium*) **were identified in 5 patients → withdrawal of all supplements/herbs**
- **In one patient, possible P-glycoprotein DI was detected** (*Boswellia serrata*) **→ removal of the supplement not necessary**

Conclusions and Relevance

✓ Identification of possible DIs led to the **withdrawal of the supplements and/or herbs in** approximately **one third of the patients**.

✓ **The review of concomitant treatments in the PC visit is essential to guarantee the effectiveness and safety of IVA/TEZ/ELX**.

Abstract number: 5PSQ-080