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PERSONAL GENOMIC PROFILES AS A TOOL TO GUIDE THERAPY SELECTION IN A MULTIPLE CHEMICAL SENSITIVITY: A CASE REPORT

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patient-sized treatments with improved efficacy and reduced side effects. Pharmacogenomic testing, main strategy of PM, studies gene variants with functional effects on drug metabolism and allows prediction of efficacy, toxicity and drug interactions.

Aim: The clinical vignette aims to provide how PM could assist psychiatry treatment.

Case Presentation: A 43-years-old woman with a 12-years history of Multiple Chemical Sensitivity (MCS), also affected by celiac disease and gastroesophageal reflux. In 2011, she was diagnosed with breast cancerin a surgically treatable stage. Due to previous severe drug adverse events, with undefined cause, no medical team accepted to take care her. Then she developed a depressive syndrome with hypochondriac features, based on DSM-IV-TR criteria.

Methods: Pharmacogenomic testing for the main enzymes involved in drugs metabolism (fig. 1) was performed and database interrogation was used to select the safer drug combination, based on the personal genomic profile. Illness progression was evaluated by Ham-A, Ham-d, BPRS, VGF and MMPI-2 scales (fig.2).

Results: Genomic profile (fig. 1) was compatible with reported previous toxic effects following assumption of different drugs. The personal genome-based choice of pharmacological therapies allowed to avoid surgery-related adverse effects. Through genome-guided therapy selection, rapidly we set-up an efficacious psychotropic therapy. After a year the access to the PM Service, the patient showed an important improvement in both social impairment and quality of life, allowing her to get out, without a surgical mask.

Conclusions: Application of pharmacogenomic screening to patients undergoing composite therapies could be an effective tool to improve clinical outcomes and minimize side effects.

Fig.1: Genomic profile

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