SILVER HILL HOSPITAL

GRAND ROUNDS

Pharmacogenomics

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Wednesday, April 17
11:00 a.m. - 12:30 p.m.
Light Refreshments Served
Silver Hill Hospital Martin Center

The utility of pharmacogenetic testing in psychiatry remains controversial. On the one hand, commercial test manufacturers aggressively promote their products claiming that results may improve patient outcomes with the kind of "personalized medicine" guidance pursued in oncology. On the other hand, no large-scale clinical trials have ever reliably demonstrated such claims in psychiatry, as noted in an FDA consumer warning issued in November 2018. This presentation will review strengths and weaknesses of existing studies comparing usual care with prescribing decisions driven by pharmacogenetics. Current knowledge about functional candidate gene single nucleotide polymorphisms (SNPs) will be discussed with respect to probing drug tolerability versus efficacy. Genetic versus nongenetic contributors to drug response will be described. Methodological "fatal flaws" of commercially-sponsored pharmacogenetic trials will be examined along with recommendations for when pharmacogenetic testing is or is not relevant (or potentially hazardous and misleading) to psychotropic drug prescribing.

Learning Objectives:

- Describe the role and interpretation of pharmacogenetic testing to inform psychotropic drug safety versus efficacy
- Discuss the scientific limitations of existing randomized trials using pharmacogenetics to predict efficacy of antidepressants in major depression
- Describe the rationale and basis for the FDA consumer warning against routine pharmacogenetic testing to guide the prescribing of psychotropic drugs
- Discuss the role of pharmacogenetics versus other patient-specific factors in devising personalized medicine approaches to psychopharmacology

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