

## 22. DRUG INDUCED LIVER INJURY: RISK FACTORS

**Author:** Guzun Cristina

**Scientific adviser:** Elina Berliba, MD, Associate Professor, Discipline of Gastroenterology, Department of Internal Medicine, *Nicolae Testemitanu* State University of Medicine and Pharmacy of the Republic of Moldova

**Introduction.** Drug induced liver injury (DILI) is a relatively rare hepatic condition as a result of the use of illegal drugs, herbal products, dietary supplements, medications or other xenobiotics. It occurs in susceptible subject through a combination of genetic and environmental risk factors believed to modify drug metabolism and/or excretion leading to a cascade of cellular events, including oxidative stress formation, apoptosis/necrosis, haptization, immune response activation and a failure to adapt. Liver toxicity related to drugs has been classically divided into two varieties: intrinsic and idiosyncratic. The intrinsic is dose related and occurs after exposure, the idiosyncratic does not correlate with the dose,

**Aim of study.** Assessment of risk factors in the evolution of hepatic disease induced by drug use

**Methods and materials.** All information was obtained from a literature review based mostly on EASL Clinical Practice Guidelines.

**Results.** New epidemiologic data suggest that approximately 20 new cases of DILI per 100,000 persons occur each year. Idiosyncratic drug induced liver injury accounts for 11% of the cases of acute liver failure in the United States. According to the research DILI is more likely to occur in females, the elderly, and patients with chronic liver disease, HIV, and obesity. Female sex may be considered a risk factor for DILI associated with specific drugs. Age has been cited as a risk factor for DILI, but the at-risk age groups differ according to specific drugs. Older age is a risk factor for DILI from isoniazid, whereas youth is a risk factor for DILI related to valproate and aspirin.

**Conclusion.** Drug induced liver injury is assumed to be a multifactorial condition. Risk factors for DILI are: medication dose, drug lipophilicity, and extent of hepatic metabolism. There is mixed evidence to support the role of host factors such as age, sex, and chronic liver disease. The impact of these risk factors may vary between individuals.