

GENDER AND AUTOIMMUNITY

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Gender is a social construct that unlike the sex exceeds the physiological and biological differences that define women and men, to become a crucible of social variables, cultural, educational and economic, that characterize individuals with a precise and direct fallout health. Gender is the cultural decline of the biological dimension of gender. In this sense, the diversity of sexual behavior in male or female as a shared social group of reference, the culture is represented by the values shared by the group, or interpersonal relationships and individuals with the environment. So the concept of health and illness is deeply conditioned. Men are more susceptible to tumors and infections, while women are more affected by autoimmune diseases, fibromyalgia and associated syndromes, from mood disorders and eating behavior. We generally as a mix of biology and culture that specifically affects the regulation of the stress and therefore the tendency toward certain diseases, typical of its genre: Autoimmune for females. Define the real prevalence of autoimmune diseases is quite difficult, because considering the natural history of subclinical forms of the disease are asymptomatic or potential symptoms and clinical features with soft, which makes it difficult to diagnose and determine an underestimate. The prevalence of these diseases varies according to sex, age, geographic area and socio-economic and cultural conditions. But women are mostly affected, in a report four times higher than males. The "gender" in Laboratory Medicine, is the way to grasp the different predictive, prognostic and follow-up of laboratory indices, as they relate to gender. In a gender perspective in Medicine Laboratory is a tool for early diagnosis, for a proper classification of the patient, to direct appropriate therapeutic choice with its striking reduction in health spending. The Laboratory Medicine, therefore, in Gender Medicine, to help ensure equity in health care, starting from the structural inequalities between female and male gender.

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GENDER PHARMACOTOXICOLOGY

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An important and emerging issue in public health field concerns gender differences between men and women in the assessment of drugs response and of susceptibility to drugs abuse.

Gender differences can influence pharmacokinetic and pharmacodynamic parameters. In fact, drugs metabolism is sexually dimorphic

and it depends on the individual enzyme involved. For example, the activity of CYP3A4 enzyme, which metabolizes approximately the 50%-60% of drugs, is greater in females and it appears to be modulated by estrogens, progestins and the age.

Pharmacodynamic differences can depend on the mechanisms mediated by sex hormones that act as transcription factors and regulate the activity of many genes in various tissues that also are not related to reproduction.

Sex differences are also present at all stages of drug abuse such initiation, escalation of use, addiction, and relapse following abstinence. While there are some differences among specific classes of abused drugs, the general pattern of sex differences is the same for all drugs of abuse.

Importantly, females begin self-administering regularly licit and illicit drugs of abuse at lower doses than males do, escalate more rapidly to addiction, and are at greater risk for relapse following abstinence.

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INTERPRETATIVE COMMENTING: GENERAL CRITERIA

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The provision of interpretative comments on reports varies widely between clinical laboratories around the world as well as in the same Country, and there is an ongoing discussion within the profession around the benefits, or not, of this practice. Opinions vary from recommending them to be an integral part of the laboratory service (1) to opposing their use, at least until evidence of benefit is established (2).

In principle, there would be little need for the comments at all if a similar expertise among test requesters could always be guaranteed. However, available data collected in different clinical settings demonstrate a very high frequency of error in diagnostic tests interpretation related to missed or delayed diagnoses (3). In addition, changes in undergraduate and junior doctor teaching in the UK and US have generally led to a reduction in the exposure of students to the laboratory medicine discipline. This resulted in doctors themselves identifying a training need in laboratory tests interpretation and/or in comments provided on laboratory reports. Factors favoring the use of interpretative reports can be summarized as follows: a) introduction of new and complex tests, b) data on physician's satisfaction and impact on clinical outcomes of the interpretative commenting practice; c) clinical and regulatory guidelines; d) increasing use of expert systems and interpretative algorithms; e) need to reduce diagnostic errors.

Available evidence demonstrates that the interpretative service was found to be useful by 98% of interviewed physicians in the US, and that in the UK 93% of physicians and nurses described interpretative comments for endocrine tests and hormones as useful or very useful. In addition, Kilpatrick and Laposata reported a valuable effect of interpretative comments on clinical outcomes (4, 5). While some guidelines have been released, a fundamental issue is represented by nature of the training required for the provision of clinically useful