

International Congress of Updates on Pediatric Gastrointestinal and Liver Disease(9-11 Apr 2014, Mashhad-Iran)

Endocrine-Manifestations of Cirrhosis and Liver Disease

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Abstract:

The liver is involved in the synthesis and metabolism of many kinds of hormones, various abnormalities hormone levels are found in advanced liver disease. For example the liver is, extremely sensitive to changes in insulin or glucagon levels. The liver is the primary organ of iron storage is frequently involved, diabetes is common in patients with iron overload and may be seen in cirrhosis. Chronic infection with HCV is associated with insulin resistance. Thyroid disease often accompanies chronic hepatitis C infection .Anti thyroid autoantibodies are also found in chronic HCV infection. Nonalcoholic liver disease (NAFLD)as a most common cause of chronic liver disease in western world ,as well accompanied by Type 2 diabetes and hyperlipidemia. Hypopituitarism and hypothyroidism also have been in NAFLD. The patients with NAFLD and Hypopituitarism may be susceptible to central obesity, dyslipidemia and insulin resistance leading to disease progression. Hepatic cirrhosis as the end stage of chronic liver disease is also associated with hypogonadism and signs of feminization. The peripheral metabolism of steroids is altered in many of hypogonadism, low testosterone level decreased libido, infertility, reduced secondary sex hair and gynecomastia, reduced spermatogenesis and peritubular fibrosis are found in men with cirrhosis. The normal function of the hypothalamic-pituitary gonadal axis is affected in liver disease. In cirrhotic patients the estrogen/androgen ratio is usually increased, the level of testosterone and dihydroepiandosteron are reduced while the estradiol level are normal or slightly elevated, these alterations are dependent on the severity of the liver disease. Successfull orthotropic liver transplantation leads to improvement of the sex hormone disturbances.

The pathogenesis of gynecomastia is due to the loss of equilibrium between estrogen and androgen caused by a feminizing state but it is due to increased estrogen precursor in cirrhosis. Here it reviews some endocrine-manifestations related to cirrhosis and the liver disease.

Oral Presentation, N 16

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