Good essay on clinical biochemistry; liver

Health & Medicine, Disease

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LIVER:

Anatomy:

It is an encapsulated, wedge shaped largest gland of the body which is located in the right hypochondrium.

Functions:

It aids in metabolism of macromolecules and hormones as well as plasma protein synthesis and also acts as a storage house.

Diseases:

The diseases of liver are categorised based on their etiologies but few important clinical entities are viral hepatitis, primary biliary cirrhosis. Primary sclerosing cholangitis, hemochromatosis, Wilson’s disease, alcoholic liver disease, paracetamol induced liver damage, liver abscess, liver adenoma, hepatocellular carcinoma and cholangiocarcinoma.

Diagnostic Tests:

The most primitive test to ascertain liver parenchymal damage is ALT and AST. A complete liver function test profile can also be done which contains liver specific enzymes and plasma bilirubin levels. Total protein levels, albumin. Globulin, prothrombin time and immunoglobulins are also assayed to assess liver function. Other disease specific proteins are also measured like G-globulins, α1 anti-trypsin deficiency, ceruloplasmin, α-fetoprotein, transferrin and ferritin. Their values stay in normal limits under normal conditions and if there is derangement, clinical correlation should be done. Besides the above mentioned non-invasive tests, there are other radiological and invasive testing modalities that are pivotal in concluding a diagnosis. Ultrasound is the basic non-invasive radiological approach and is sensitive in detecting liver damage. Computed Tomography (CT), Magnetic Resonance Imaging (MRI) and its helical variant are also diagnostic. Invasive methods are liver biopsy and laparoscopic exploration.