Autoimmune Hepatitis (AIH) is an autoimmune disease which constitutes 5% of all chronic liver diseases. It is seen mostly in females of 35 to 36 years of age which presents with arthritis, amenorrhea, hypergammaglobulinemia and extrahepatic manifestations[1].

It is of three types:-

**Type I:** AIH show presence of antinuclear antibody (ANA), antismooth muscle antibody, anti F-actin antibody. Immunosuppression is very good.

**Type II:** AIH is defined by presence of anti liver kidney microsomal antibody (anti LKM Ab). It is seen mostly in younger age group and response to immunosuppression therapy is poor and more likely to progress to cirrhosis[1].

**Type III:** AIH is characterized by presence of antibodies against soluble liver antigen (anti SLA Ab) and liver pancreas antigen. A large number of patients have ANA and ASMA may also be present hence now not kept in type I AIH. Frequency of Anti SLA AIH varies from 9-16%[2]. Anti SLA have high specificity for AIH because 90% cases anti SLA positive patients have AIH & only 10% have primary biliary cirrhosis. Biochemical remission is achieved in 90% anti SLA positive AIH but relapse is seen in 53% patients after withdrawal of immunosuppressive drugs[2].

Anti SLA antibody positive patient are mostly DRB1*03 positive and have anti SSA (R0-52) antibody, ANA and ASMA[3]. Prolactin is an immune stimulating hormone that stimulates immune complex mediated diseases and organ specific autoimmune diseases especially systemic lupus erythematosus (SLE). Prolactin is secreted by anterior pituitary. Microadenoma of pituitary have been described in association with autoimmune conditions such as rheumatoid arthritis, systemic lupus erythematosus, and primary biliary cirrhosis. These microadenomas are typically 3-5 mm in size and arise from the anterior pituitary gland. They may cause hyperprolactinemia which can lead to menstrual irregularities or amenorrhea. The pituitary gland is responsible for secreting prolactin which plays a role in the regulation of milk production and has been linked to the development of autoimmune diseases.
Autoimmune Hepatitis with Microadenoma of Pituitary

Prolactin is a hormone synthesized in lactotrope and pituitary tumor present in anterior pituitary. This maintains lactation, decreases folliculogenesis and granulosa cell aromatase enzyme hence produces amenorrhea and decreases reproductive functions[4]. Prolactin also have immune regulatory effect[5]. Cells of the immune system synthesizes this hormone and also cells of immune system secretes cytokines by immune cells like IL-1, IL-6, IFN gamma, TNF, platelet activation factor and substance P participate in the release of prolactin which act on lymphocyte.

Prolactin act as co-mitogen with concanavlin A and induces IL-2 receptor on the surface of lymphocyte. It stimulates proliferation and function of lymphocyte.

Hyperprolactinemia is found in certain autoimmune diseases like SLE, Fibromyalgia, and Rheumatoid arthritis[6].

Hyperprolactinemia is also observed in patients with pituitary tumors[7]. It is associated with increased thyroid volume and autoimmune thyroid diseases. (1991) Semin Arthritis Rheum 20(5): 273-284.

There are reports to suggest that hyperprolactinemia occurs in SLE patients and these patients have high incidence of anemia and serositis[8,9].

A study from Mexico reported that 25% of SLE patients displayed hyperprolactinemia, there lymphocytes showed increased CD69 expression and produced prolactin when cultured invitro[10].

In our case patient had typical feature of autoimmune hepatitis because she had arthralgia, jaundice, hepatomegaly, amenorrhea and her anti SLA, F-actin and ANA was positive but there was no any other feature suggestive of SLE or any other autoimmune disease. lactation without pregnancy could be explained by hyperprolactinemia. Associations of AIH with primary biliary cirrhosis and primary sclerosing cholangitis have been described[2]. Association of AIH with organ specific polyglandular autoimmune disease have also been found due to defect in autoimmune regulatory gene (AIRE) but no association with microadenoma of pituitary and hyperprolactinemia have been described[3].

Probably we are the first who are reporting AIH with F-actin, ANA and anti-SLA Ab in 34 yrs old lady with prolactin secreting adenoma of pituitary gland.

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References


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