Autoimmunity

(Author’s name)

(Institutional Affiliation)

**Introduction**

The purpose of the body’s immune system is to protect the body from all kinds of infections and diseases. An autoimmune disease often attacks healthy cells in a person’s body by mistake which therefore affects many body parts. The causes of autoimmune diseases are not concrete but they run in families. The autoimmune diseases consist of more than eighty types of disorders which makes it tricky for the health care provider to know if you have one of these diseases and if so which one particularly. Autoimmune disorders occur because the immune system cannot distinguish between the healthy tissues from the antigens. This disorder may cause the destruction of the body tissues, an abnormal growth of an organ and change in the body function.

Autoimmune diseases can affect almost any part of an individual’s body that includes the heart, muscles, brain, nerves, muscles, eyes, skin, lungs, joints, digestive tracts, kidney, glands, and blood vessels (Lane, 2004). The most prevalent symptom of an autoimmune disease is inflammation, pain, heat and swelling. How the disease affects an individual’s is dependent on which part of the body is targeted. If the disease affects the joints, one might have symptoms such as stiffness and loss of function. Treatment often depends on the disease but the most vital goal of treatment is to reduce inflammation. The cause of the autoimmune disease is not certain and it often seen to run in families. Women seem to be more susceptible to these diseases. Native-American, Hispanic-American and African-American women are seen to have a higher risk of some of the autoimmune diseases.

**Process of Autoimmunity**

Normally, when the immune system notices a foreign antigen its adaptive response is to clear the body antigen. For example, the cells infected with the virus are destroyed by the cytotoxic T-cells while the soluble antigen are removed by the immune complexes of the antigen and antibodies that form and further taken up by the monocle phagocytic system cells such as macrophages. It is often impossible for the immune effector mechanism to eliminate the antigen completely when an immune response that adapts develops against the self-antigens. In humans, the events that lead to the cause of autoimmunity is not known and it often arises spontaneously.

The autoimmune process therefore occurs when the immune system that is intended to fight viruses and bacteria that are try to harm the human body, instead make the antibodies to attack the human healthy and normal cells. The immune system therefore makes an error by confusing a section of the human body to be an external invader trying to cause illness or harm.

**Autoimmunity in the Endocrine System**

The endocrine system comprises of all glands of the body as well as the various hormones that are produced by the particular glands (Women's International Pharmacy, 2016). The autonomy of the endocrine system includes the hypothalamus which is also located in the brain. The hypothalamus causes the direct control of the endocrine system to occur through the pituitary gland. The endocrine system is seen to be particularly vulnerable to the attack of autoimmunity disease. The endocrine system controls the body by working alongside the nervous system. The endocrine system works slowly as compared to the nervous system but it is wide spread, long lasting and has powerful effects on the specific glands.

The endocrine system is often a target for the autoimmune disease (Kahaly and Schuppan, 2015). In a case of an autoimmune disease, the endocrine organs and gland may be affected which includes the thyroid, pituitary, pancreases, testes and the ovaries. In cases of Grave’s disease, they thyroid gland goes into an override in response to overproduction while an insulin-dependent diabetes, the pancreases comes under attack. When antibodies go against the naturally occurring hormones such as progesterone and estradiol it often causes problems. These hormones can cause women to experience insufficient production of the uterine lining or erratic ovulation. This can actually cause abnormal menstruation and prevent the implementation of the fetus during pregnancy.

**Pathophysiological changes**

Pathophysiology refers to the changes that occur from an injury or a disease. The endocrine gland goal is to regulate metabolism, growth and homoeostasis. Common problems that causes endocrine disorder include; too little hormones being secreted, too much of hormone secretion and the insensitivity of the target organ of the hormone. Adenoma is a pituitary disorder that results in an endocrine gland tumor and it is the most common pituitary disorder. Depending on the size of the tumor, treatment can be through surgical removal, radiation or simply monitoring the condition. Pheochromocytoma is an adrenal hormone problem that causes a benign tumor of the adrenal medulla rare. It causes excessive release of the epinephrine and norepinephrine which causes hypertension, cephalgia and often associated with a feeling of stress. The recommended treatment is removal of the tumor.

**References**

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