

Awareness on Autoimmune disorders among college students – A survey

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ABSTRACT

Introduction: The immune system protects us from viruses, bacteria, foreign substances, and even cancer cells, but it does with a balance. An autoimmune disease is a condition in which your immune system mistakenly attacks your body. Autoimmune processes can have various results, for example, slow destruction of a specific type of cells, stimulation of an organ into excessive growth, or interference in its function. Frequently affected organs and tissues include the endocrine gland, such as thyroid, pancreas, and adrenal glands; components of the blood, such as red blood cells; and the connective tissues, skin, muscles, and joints. The aim of this survey is to create an awareness on autoimmune disease. **Materials and Methods:** It is a questionnaire-based survey conducted among 100 students in Chennai. The results were documented and analyzed. **Results:** From the survey, it was evident that more than half of the individuals who took survey were aware of autoimmune disease and were able to correctly identify the autoimmune disease among other diseases.

KEY WORDS: Autoimmune disease, Cancer cells, Immune system

INTRODUCTION

The immune system protects us from viruses, bacteria, foreign substances, and even cancer cells, but it does with a balance. Without a good immune response (an underactive immune system), even minor infections could be deadly.^[1] However, on the other hand, an overactive immune response (as with autoimmune diseases) can lead to illness and possibly death. An autoimmune disease is a condition in which your immune system mistakenly attacks your body. The immune system normally guards against germs such as bacteria and viruses. When it senses these foreign invaders,^[2] it sends out an army of fighter cells to attack them. Normally, the immune system can tell the difference between foreign cells and your own cells. In an autoimmune disease, the immune system mistakes part of your body such as your joints or skin as foreign. It releases proteins called autoantibodies that attack healthy cells. Some autoimmune diseases target only one organ.^[3] Type 1 diabetes damages the pancreas. Other diseases, such as lupus, affect the whole body.

Doctors do not know what causes the immune system misfire. Yet, some people are more likely to get an autoimmune disease than others. Women get autoimmune diseases at a rate of about 2–1 compared to men – 6.4% of women vs. 2.7%^[4] of men. Often the disease starts during a woman’s childbearing years. Some autoimmune diseases are more common in certain ethnic groups.^[1] For example, lupus affects more African-American and Hispanic people than Caucasians. Certain autoimmune diseases, such as multiple sclerosis and lupus, run in families. Not every family member will necessarily have the same disease, but they inherit a susceptibility to an autoimmune condition. Because the incidence of autoimmune diseases is rising, researchers suspect that environmental factors such as infections and exposures to chemicals or solvents might also be involved.^[5] A “Western” diet is another suspected trigger. Eating high-fat, high-sugar, and highly processed foods is linked with inflammation, which might set off an immune response. However, this has not been proven. Another theory is called the hygiene hypothesis. Because of vaccines and antiseptics, children today are not exposed to as many germs as they were in the past. The lack of exposure could make their immune system overreact to harmless substances.

Access this article online

Website: jprsolutions.info

ISSN: 0975-7619

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Received on: 24-01-2019; Revised on: 11-02-2019; Accepted on: 16-03-2019

Particular autoimmune disorders are classified into organ-specific disorders and non-organ-specific types.^[6] Autoimmune processes can have various results, for example, slow destruction of a specific type of cells, stimulation of an organ into excessive growth, or interference in its function. Frequently affected organs and tissues include the endocrine gland, such as thyroid, pancreas, and adrenal glands; components of the blood, such as red blood cells; and the connective tissues, skin, muscles, and joints. Some autoimmune diseases fall between the two types. Patients may experience several organ-specific diseases at the same time. There is, however, little overlap between the two ends of the spectrum.

In organ-specific disorders, the autoimmune process is directed mostly against one organ. For example, the affected organs^[7] include thyroid gland in case of Hashimoto's thyroiditis, pernicious anemia (stomach), adrenal glands in case of Addison's disease, and pancreas in case of type 1 diabetes.

In non-organ-specific disorders, autoimmune activity is widely spread throughout the body. Examples include rheumatoid arthritis, systemic lupus erythematosus (or lupus), and dermatomyositis.^[8]

The early symptoms of many autoimmune diseases are very similar, such as:

- Fatigue
- Achy muscles
- Swelling and redness
- Low-grade fever
- Trouble concentrating
- Numbness and tingling in the hands and feet
- Hair loss
- Skin rashes.

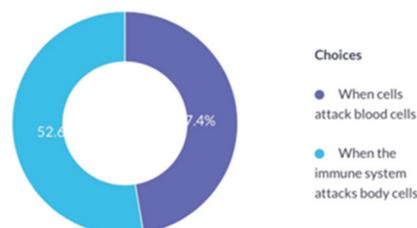
The antinuclear antibody test is often the first test that doctors use when symptoms suggest an autoimmune disease. A positive test means you likely have one of these diseases, but it would not confirm exactly which one you have. Other tests look for specific autoantibodies produced in certain autoimmune diseases.^[9] Your doctor might also do tests to check for the inflammation these diseases produce in the body.

MATERIALS AND METHODS

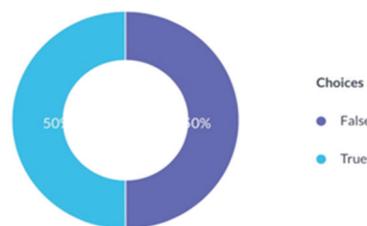
A closed-ended questionnaire was prepared and circulated among 100 students in Chennai for a duration of 1 month. The questionnaire was distributed among students containing 10 questions and the students were asked to fill the questionnaire.

The respondents were asked to tick the most appropriate answer from the list of given answers. A filled questionnaire with responses was thus collected immediately and computed.

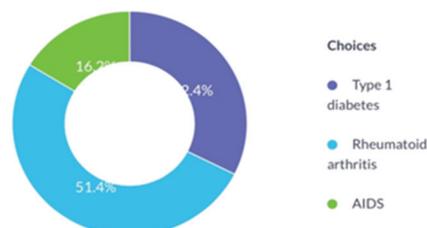
Q1 What is an auto-immune disease?
Multiple Choice



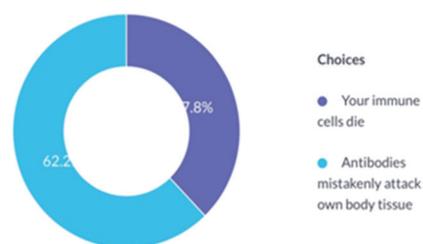
Q2 The exact reason for developing auto-immune disease is known.
Multiple Choice



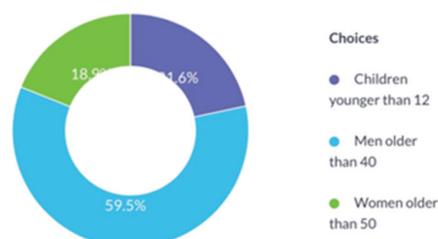
Q3 Which of these is an auto-immune disease ?
Multiple Choice



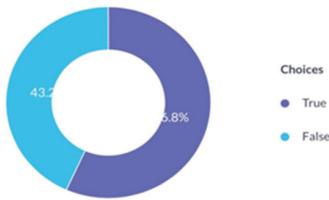
Q4 If you have an auto-immune disease, what happens with the immune system ?
Multiple Choice



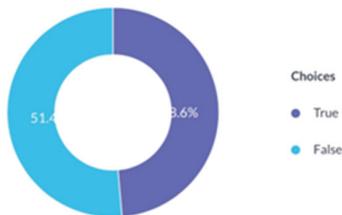
Q5 Auto-immune Diseases strike which group more often?
Multiple Choice



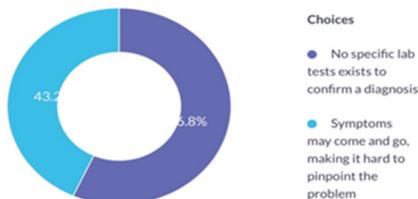
Q6 Thyroid, skin and joints are the most affected organs by auto-immune diseases?
Multiple Choice



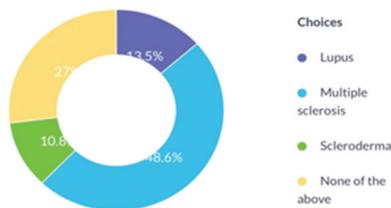
Q7 Lupus is more common among Caucasians and Hispanic women
Multiple Choice



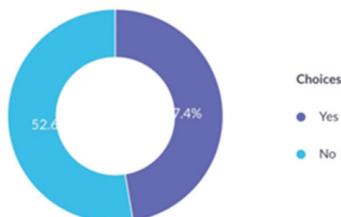
Q8 why are some auto-immune diseases difficult to diagnose?
Multiple Choice



Q9 Which of these of these auto-immune disease can be cured?
Multiple Choice



Q10 Do you think pre-natal tests must be done to find out whether the ch has auto-immune disease?
Multiple Choice



RESULTS AND DISCUSSION

More than half of the individuals knew how it is acquired and correctly selected the autoimmune disease among other diseases.

Women older than 50 are more prone to autoimmune diseases, but this was the least response.

The most affected parts of the body are thyroid, skin, and joints.

None of the autoimmune diseases can be cured once they are acquired.

Most of the responses agreed to do prenatal tests to find if the child has autoimmune disease.

CONCLUSION

The awareness on autoimmune disease among college students was overall plausible and impressive. The basic criteria and causes were known.

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Source of support: Nil; Conflict of interest: None Declared