Autoimmune Diseases

The main role of the immune system is to fight foreign invaders such as bacteria, moulds and viruses.
In autoimmune diseases the immune system produces antibodies that attack the body's own cells, tissues and organs, resulting in inflammation and damage.

Autoimmune diseases include common and rare diseases

Autoimmune diseases are a broad range of more than eighty related disorders, ranging from common to very rare. They affect around 5% of people, and are an important health issue in Australia and New Zealand:

- Common autoimmune diseases include thyroiditis, rheumatoid arthritis and diabetes.
- Less common autoimmune diseases include systemic lupus erythematosus (SLE), also known as lupus, and vasculitis disorders (inflammation of blood vessels).

What causes autoimmune diseases?

The causes of autoimmune diseases are unknown. In many cases there appears to be some inherited tendency. Other factors such as infections and some drugs may also play a role in triggering autoimmune diseases.

How are autoimmune diseases diagnosed?

Autoimmune diseases are usually diagnosed using a combination of clinical history, blood tests (autoantibodies, inflammation, organ function), and other investigations such as x-rays. Sometimes a biopsy of affected tissues may be required for diagnosis.

Localised (organ specific) autoimmune diseases

Whilst localised (organ specific), autoimmune diseases mainly affect a single organ or tissue, the effects frequently extend to other body systems and organs. These diseases are often managed by organ-specific medical specialists, such as endocrinologists, gastroenterologists, neurologists or rheumatologists.

Systemic autoimmune diseases

Systemic autoimmune diseases can affect many body organs and tissues at the same time. They can be broadly classified into rheumatological disease and vasculitis disorders. These diseases are often managed by clinical immunology/allergy specialists and/or rheumatologists.

Examples of localised (organ specific) autoimmune diseases

- Addison’s disease (adrenal)
- Autoimmune hepatitis (liver)
- Coeliac disease (gastrointestinal tract)
- Crohn’s disease (gastrointestinal tract)
- Diabetes Mellitis Type 1a (pancreas)
- Grave’s disease (thyroid)
- Guillain-Barre syndrome (nervous system)
- Hashimoto’s thyroiditis (thyroid)
- Multiple sclerosis (nervous system)
- Myasthenia gravis (nerves, muscles)
- Pernicious anaemia (stomach)
- Primary biliary cholangitis, formerly known as primary biliary cirrhosis (liver)
- Sclerosing cholangitis (liver)
- Ulcerative colitis (gastrointestinal tract)

Examples of rheumatological systemic autoimmune diseases

- Antiphospholipid antibody syndromes (blood cells)
- Dermatomyositis (skin, muscles)
- Mixed connective tissue disease
- Polymyalgia rheumatica (large muscle groups)
- Polymyositis (skin, muscles)
- Rheumatoid arthritis (joints, less commonly lungs, skin, eyes)
- Scleroderma (skin, intestine, less commonly lungs, kidneys)
- Sjögren's syndrome (salivary glands, tear glands, joints)
- Systemic Lupus Erythematosus (skin, joints, kidneys, heart, brain, red blood cells, other)

Treatment options for autoimmune diseases

Currently there are no cures for autoimmune diseases, although there is a wide range of treatment options, which depend on the stage and type of autoimmune disease. The main aims of treatments for autoimmune diseases are to relieve symptoms, minimise organ and tissue damage and preserve organ function.

Treatment options include:

- Replacement of end organ functions (such as insulin in diabetes and thyroxine in autoimmune thyroid disease).
- Non-steroidal anti-inflammatory medications (NSAIDS).
- Corticosteroid anti-inflammatory medications (such as Prednisolone).
- Immunosuppressive medications.
- Therapeutic monoclonals (such as TNF inhibitors).
- Immunoglobulin replacement therapy.

What happens if I have an autoimmune disease?

There are many different autoimmune diseases with different treatments and consequences for people with these diseases. It is important to find out as much as possible about your autoimmune disease by asking your treating doctor questions.

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