

The Diagnosis of Lupus



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LUPUS UK is the registered national charity for people with systemic lupus erythematosus (SLE) and discoid lupus erythematosus (DLE) supporting our members through the Regional Groups and advising others as they develop the symptoms prior to diagnosis

You can help by taking up membership.
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Please contact National Office should you require further information on the sources used in the production of this booklet or for further information about lupus. LUPUS UK will be pleased to provide a booklet and details of membership.



DIAGNOSIS OF LUPUS

Introduction:

Systemic lupus erythematosus (SLE) can be difficult to diagnose as it has similar symptoms to several other, more common, diseases. This booklet has been produced as a guide for those seeking a diagnosis to provide more information about the process and tests involved.

Lupus is an autoimmune disease whereby the person's immune system gets 'confused' and attacks their own cells and tissues rather than only targeting matter foreign to the body (such as bacteria and viruses). Symptoms depend on which organs lupus may be affecting. However, common symptoms tend to be fatigue, joint pain, loss of appetite, skin rash, weight loss, fevers and hair loss. Fatigue in particular can be persistent and disabling for many.

Lupus can affect different people in many different ways. It can also range from being mild to potentially serious if many organ systems are affected. It is important to make the diagnosis of lupus early so that treatment may commence in a timely manner. However, physicians are also cautious in labeling someone with lupus when they do not have this condition, therefore a thorough clinical assessment and numerous tests are often needed to confidently make the diagnosis.

The ultimate goal of treatment is to both control current lupus activity and also prevent lupus from causing irreversible damage to organs, thus allowing the patient to maintain as normal a life as possible both in the present and future. In order for this to occur a confident diagnosis of lupus needs to be made and ideally needs to be made early. This information booklet summarises how a physician arrives at a diagnosis of lupus in order for treatment to be started.

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DIAGNOSIS OF LUPUS

Lupus is the short-hand term used when referring to ‘Systemic Lupus Erythematosus’ or SLE. The word ‘systemic’ means that the disease can affect different parts of the body. In fact lupus (SLE) can potentially affect any organ of the body. Commonly it may affect the skin, joints, kidneys, membranes lining the lungs or heart, blood cells, lungs and nervous system

Principles in making a diagnosis

In order for a physician to reach a diagnosis of lupus three essential steps are required:

- 1) A detailed overview of the patients symptoms and past medical history
- 2) A detailed physical examination, which includes testing the urine
- 3) Tests - mostly blood tests but this may also involve other tests such as biopsy of the affected organs e.g. kidney or skin

SLE can often ‘mimic’ other conditions. For example, if a patient has a fever associated with lupus, physicians will want to ensure this is not due to an infection. It is often necessary to undertake tests to rule out other conditions before a diagnosis of lupus can be made with confidence.

Specific ‘diagnostic’ features of lupus

The American College of Rheumatology established 11 abnormalities or ‘criteria’ which, if combined, strongly suggests that the patient has lupus.

These are termed classification criteria which are necessary in research studies to ensure that patients enrolled into the studies have lupus. Of the 11 criteria listed in table 1, a patient needs to have four or more to be classified as having lupus. The criteria were developed in 1982 and revised in 1997. They have stood the test of time and have proven to be very good at identifying patients with lupus. Many physicians effectively use these as diagnostic criteria.



CRITERIA	DESCRIPTION
MALAR RASH	Rash over the cheeks
DISCOID RASH	Red, sometimes circular, patches of skin with scaling
PHOTOSENSITIVITY	Skin very sensitive to sunlight
ORAL ULCERS	Recurrent crops of ulcers within the mouth or nose
SEROSITIS	Inflammation of the membranes that line the lungs or heart

ARTHRITIS	Affecting two or more joints - causing stiffness and pain
RENAL	Inflammation of the filtering apparatus in the kidneys called the glomerulus, which leads to protein leaking out into the urine
NEUROLOGICAL	Can affect the nerves in many different ways, such as seizures or psychosis
HAEMATOLOGICAL	Low levels of haemoglobin (anaemia), white cells (which help fight infection) and/or platelets (which help in blood clotting)
IMMUNOLOGICAL-1	Antibodies to double-stranded DNA, Sm and/or phospholipid (e.g. anti-beta2 glycoprotein I or lupus anticoagulant)
IMMUNOLOGICAL-2	Anti-nuclear antibodies (ANA)

Table 1 - Adaptation of the American College of Rheumatology classification criteria for SLE

Sometimes a tissue biopsy is helpful to both confirm the diagnosis and define the severity of inflammation that might be occurring in that organ. This is most frequently performed when lupus affects the skin or kidneys.

It is important to mention that some people develop these features shown in table1 sequentially or gradually. Hence, some people may be termed as having ‘evolving lupus’ or a ‘lupus-like’ condition. Another term that is often used is ‘undifferentiated autoimmune rheumatic disease’. In these patients, whilst a diagnosis of lupus is not definite, often a period of monitoring is necessary to establish whether lupus evolves or not. It is often necessary to start treatment even when a definite diagnosis of lupus cannot be made.

There is also a huge range in severity when patients are diagnosed - some have relatively mild disease (for example, a mild malar rash, mouth ulcers and positive ANA and double-stranded DNA antibodies with no major organ involvement) whilst, at the other end of the spectrum, patients may present with severe disease with major organ involvement at the outset, (for example, psychosis and kidney involvement). Making the diagnosis can sometimes be more difficult and/or delayed in either those with milder disease or those with more gradual onset of symptoms, making awareness of lupus all the more important amongst health care professionals and the public.

Why and how are the immunological tests important in helping to make the diagnosis?

Anti-double stranded DNA antibodies are very specific for lupus in that they are typically not seen in any other condition nor in the healthy population. However, they are not very sensitive in picking up lupus, occurring in around 60% of

patients with lupus. If someone is positive for these antibodies, it often means they have lupus, but if they are negative it does not necessarily mean they do not have lupus.

Conversely, ANA is very sensitive for lupus as over 95% of everyone with lupus has these antibodies. However, they are also present in many other conditions, such as rheumatoid arthritis, and even around 10% of the healthy population test positive for this - they are not specific for SLE. If someone tests positive for ANA it does not necessarily mean that they have lupus, however, if they are negative then it very unlikely that they have lupus.

Both ANA and anti-dsDNA antibody tests are helpful in providing an indicator as to whether the patient's symptoms may be due to lupus. There are also other antibodies which may be helpful, like anti-Sm antibodies which are also very specific for lupus but even less sensitive, occurring in only around 10% of people with lupus. Also testing for a protein called complement-3 (C3), that is not an antibody but still involved in the immune system, may be helpful as low levels of C3 suggests lupus.

Is the diagnosis of lupus made in the same way for younger people?

Around 15-20% of everyone with lupus develops lupus as a child (defined as under the age of 17 or 18 years). When this occurs, the diagnosis is childhood onset or juvenile onset SLE (JSLE). Though the age of onset is younger, the classification criteria used for adult SLE as shown in table 1 are also the same for JSLE. Therefore, the diagnosis in young people is made effectively in the same way as that for adults.

General 'non-specific' symptoms

Many people with lupus have symptoms that do not feature in the classification criteria but which nevertheless are severe in that they adversely affect their quality of life. These include:

- 1) fatigue - which can be severe and unremitting
- 2) joint and/or muscle aches
- 3) hair loss
- 4) Raynauds (when the fingers and sometimes toes can drain in colour and go white, or become blue, often in response to the cold. They may also become painfully red in the warmth)
- 5) loss of appetite
- 6) weight loss
- 7) fevers
- 8) night sweats
- 9) low mood, anxiety
- 10) swollen glands

These symptoms are common in many patients with lupus, but they are not included in the classification criteria as many other diseases can cause these symptoms. For example, bad flu can cause fever, fatigue, joint and muscle ache, swollen glands and loss of appetite. In fact, many patients liken having lupus to having very bad flu all the time. It is when these symptoms are persistent that physicians should at least consider lupus amongst other potential causes as the diagnosis.



Six helpful hints in diagnosing lupus and predicting flares:

- 1) Recurrent mouth ulcers are common, especially in teenagers, but this does not necessarily mean someone has lupus. However, if mouth ulcers are also accompanied by other symptoms such as a skin rash made worse by sun exposure, joint pain and stiffness and extreme fatigue, then it is worth investigating for the possibility of lupus.
- 2) In young people onset of lupus can mimic a number of other diseases. For example, teenagers in early lupus disease are misdiagnosed as having a viral infection such as glandular fever or prolonged flu. Often lupus is not considered by the GP, especially in children and adolescents.
- 3) Fatigue and hair loss may be due to lupus but there are also many other causes which often occur more frequently in patients with lupus. Examples include; an underactive thyroid gland, anaemia, iron deficiency and possibly vitamin D deficiency. It is important that the treating physician does not just assume fatigue and / or hair loss is due to lupus and looks for other reversible causes.
- 4) Typically in lupus, blood tests may show a raised ESR with normal CRP, however, if the CRP is also very high then this implies that something else is going on, usually an infection.
- 5) Lymphocyte counts are often low in lupus, especially if the disease is active. Usually one does not reduce treatment of lupus if lymphocytes alone are low.
- 6) Experience from running a large adolescent and young adult lupus clinic indicates that stress can associate with flares of lupus. Managing stress is important. Infections can also precipitate flares of lupus.

It is important that prescribed medicines are taken according to instructions and that, should a flare occur, the patient seeks help from the GP or hospital physician.

Information on medication used in the treatment of lupus can be found in the factsheet LUPUS and Medication available from LUPUS UK.

LUPUS UK

LUPUS UK is a registered charity with more than 5,000 patient members supported by the Regional Groups. We provide a large variety of information for those seeking a better understanding of lupus. The charity offers a comprehensive range of books for purchase and can supply free of charge Information Packs for individuals, nurses and GPs. The LUPUS UK national magazine “LUPUS UK News & Views” is published three times during the year with particular emphasis on medical articles concerning lupus.

Publicity materials, leaflets, posters, a dvd for the newly diagnosed, media releases and more are always available from the charity’s National Office for better awareness about lupus in clinics, hospitals and public places.