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Complication of SLE, a review of different studies

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Abstract
Systemic lupus erythematosus (SLE), is the most common type of lupus. SLE is an autoimmune disease in which the immune system attacks its own tissues, causing widespread inflammation and tissue damage in the affected organs. It can affect the joints, skin, brain, lungs, kidneys, and blood vessels. There is no cure for lupus, but medical interventions and lifestyle changes can help control it. The seriousness of SLE can range from mild to life-threatening. The disease should be treated by a doctor or a team of doctors who specialize in care of SLE patients. People with lupus that get proper medical care, preventive care, and education can significantly improve function and quality of life. The causes of SLE are unknown, but are believed to be linked to environmental, genetic, and hormonal factors. People with SLE may experience a variety of symptoms that include fatigue, skin rashes, fevers, and pain or swelling in the joints. Among some adults, having a period of SLE symptoms—called flares—may happen every so often, sometimes even years apart, and go away at other times—called remission. However, other adults may experience SLE flares more frequently throughout their life.Other symptoms can include sun sensitivity, oral ulcers, arthritis, lung problems, heart problems, kidney problems, seizures, psychosis, and blood cell and immunological abnormalities.

Keywords: SLE, autoimmune, disease.

Introduction
Systemic lupus erythematosus (SLE), is the most common type of lupus. SLE is an autoimmune disease in which the immune system attacks its own tissues, causing widespread inflammation and tissue damage in the affected organs. It can affect the joints, skin, brain, lungs, kidneys, and blood vessels. There is no cure for lupus, but medical interventions and lifestyle changes can help control it. The seriousness of SLE can range from mild to life-threatening. The disease should be treated by a doctor or a team of doctors who specialize in care of SLE patients. People with lupus that get proper medical care, preventive care, and education can significantly improve function and quality of life. The causes of SLE are unknown, but are believed to be linked to environmental, genetic, and hormonal factors. People with SLE may experience a variety of symptoms that include fatigue, skin rashes, fevers, and pain or swelling in the joints. Among some adults, having a period of SLE symptoms—called flares—may happen every so often, sometimes even years apart, and go away at other times—called remission. However, other adults may experience SLE flares more frequently throughout their life. Other symptoms can include sun sensitivity, oral ulcers, arthritis, lung problems, heart problems, kidney problems, seizures, psychosis, and blood cell and immunological abnormalities. SLE can have both short- and long-term effects on a person's life. Early diagnosis and effective treatments can help reduce the damaging effects of SLE and improve the chance to have better function and quality of life. Poor access to care, late diagnosis, less effective treatments, and poor adherence to therapeutic regimens may increase the damaging effects of SLE, causing more complications and an increased risk of death [1]. SLE can limit a person's physical, mental, and social functioning. These limitations experienced by people with SLE can impact their quality of life, especially if they experience fatigue. Fatigue is the most common symptom negatively affecting the quality of life of people with SLE [2, 3]. Many studies use employment as a measure to determine the quality of life of people with SLE, as employment is central to a person's life [3]. Some studies have shown that the longer a person has had SLE, the less likely they are to be a part of the workforce. On average, only 46% of people with SLE of working age report being employed [3]. Adherence to treatment regimens is often a problem, especially among young women of childbearing age (15 to 44 years). Because SLE treatment may require the use of strong immunosuppressive medications that can have serious side effects, female patients must stop taking the medication before and during pregnancy to protect unborn children from harm. SLE is diagnosed by a health care provider using symptom assessments, physical examination, X-rays, and lab tests. SLE may be difficult to diagnose because its early signs and symptoms are not specific and can look like signs and symptoms of other diseases [1]. SLE may also be misdiagnosed if only a blood test is used for diagnosis. SLE can affect people of all ages, including children. However, women of childbearing ages—15 to 44 years—are at greatest risk of developing SLE [1]. Women of all ages are affected far more than men (estimates range from 4 to 12 women for every 1 man) [1]. Minority racial and ethnic groups—blacks/ African Americans, Hispanics/ Latinos, Asians, and American Indians/ Alaska Natives—are affected more than whites/ Caucasians [1]. Most people with SLE do not have family members with the disease; however, some people with SLE do have a family history of the disease. Men and women with an immediate family member with SLE have only a slightly higher risk for the disease. Treating SLE often requires a team approach because of the number of organs that can be affected. SLE treatment consists primarily of immunosuppressive drugs that inhibit activity of the immune system. Hydroxychloroquine and corticosteroids (e.g., prednisone) are often used to treat SLE. The FDA approved

belimumab in 2011, the first new drug for SLE in more than 50 years. SLE also may occur with other autoimmune conditions that require additional treatments, like Sjogren's syndrome, antiphospholipid syndrome, thyroiditis, hemolytic anemia, and idiopathic thrombocytopenia purpura. Incidence and prevalence are terms commonly used to describe how many people have a disease or condition. CDC uses the latest available data for important research questions. Recent national estimates of prevalence and incidence are not available for SLE. SLE is relatively uncommon, is difficult to diagnose, and is not a reportable disease, so it is expensive to capture all diagnosed cases reliably for epidemiologic studies. There are no recent studies to determine if SLE prevalence or incidence are changing over time. CDC funded several population-based patient registries to better estimate how many people have doctor-diagnosed SLE in certain racial/ethnic groups. The registries provide the most recent available prevalence and incidence estimates for SLE for whites, blacks, and American Indians/Alaska Natives was published in 2014, and those for Hispanics and Asians were published in 2017. The CDC-funded lupus registries used similar intensive methods for case finding (hospitals, specialists' practices, health department data) and for seeing if possible cases met standard classification criteria. Prevalence is a measurement of all individuals affected by a disease at a particular time, usually a year. Older national prevalence estimates vary widely due to differences in case definitions, small study populations, and study methods. A conservative estimate suggests a prevalence of 161,000 with definite SLE and 322,000 with definite or probable SLE [4]. Results from the CDC Lupus registries estimated that annual prevalence from 2002–2004 was much higher for blacks than whites in Michigan (Washtenaw and Wayne Counties) (111.6 vs 47.5 per 100,000 people) [5]. and in Georgia (DeKalb and Fulton Counties) (128.0 vs 39.9 per 100,000 people).(6) Annual prevalence from 2007–2009 for American Indians/Alaska Natives was 178 per 100,000 people [7]. Registries in California (San Francisco County) and New York City (Manhattan) provided 2007-2009 prevalence estimates for Hispanics (90.5 and 82.2 per 100,000 people, respectively) and Asians (94.7 and 56.2 per 100,000 people, respectively) [8, 9]. Incidence is a measurement of the number of new cases of individuals who contract a disease during a particular period of time, often a year. Recent national incidence estimates are not available for SLE. National incidence data are difficult to obtain because it is relatively expensive to capture all diagnosed cases reliably (learn more about SLE prevalence and incidence above) and the year of onset is hard to determine (slowly developing, non-specific symptoms and signs), so resource-intense studies must be done in small areas [1]. Causes of premature death associated with SLE are mainly active disease, organ failure (e.g., kidneys), infection, or cardiovascular disease from accelerated atherosclerosis [10]. In a large international SLE cohort with average follow-up of over 8 years during a 1958–2001 observation interval, observed deaths were much higher than expected for all causes, and in particular for circulatory disease, infections, renal disease, and some cancers. Those who were female, younger, and had SLE of short duration were at higher risk of SLE-associated mortality [11]. Using death certificates for US residents, SLE was identified as the underlying cause of death for an average of 1,176 deaths per year from 2010–2016 [12]. SLE was identified as a contributing cause of death (one of multiple causes of death, including underlying cause of death) for an average of 2,061 deaths per year during that 7-year-period [13]. SLE is the most common and most serious type of lupus. Other types of lupus include the following:

Cutaneous lupus (skin lupus) is lupus that affects the skin in the form of a rash or lesions. This type of lupus can occur on any part of the body, but usually appears where the skin is exposed to sunlight

Drug-induced lupus is similar to SLE, but occurs as the result of an overreaction to certain medications. Symptoms usually occur 3 to 6 months after starting a medication, and disappear once the medicine is stopped [14]. Neonatal lupus occurs when an infant passively acquires auto-antibodies from a mother with SLE. The skin, liver, and blood problems resolve by 6 months, but the most serious problem—congenital heart block—requires a pacemaker and has a mortality rate of about 20% [15].

Methods

This is a review of different studies.

Discussion

Many people who have active lupus feel ill in general. They have fever, weight loss, and fatigue. When their immune system attacks a certain organ or part of the body, they can also have more specific problems. Lupus can affect these body parts:

Skin. Skin problems are common with lupus. So are hair loss and mouth sores. If you have a type called discoid lupus, you get large, red, circular rashes that may scar. Sunlight usually irritates skin rashes. A common lupus rash called subacute cutaneous lupus erythematosus is often worse after you go out in the sun. You might have it on your arms, legs, and torso. A rare but serious form of lupus rash called a bulbous lupus rash causes large blisters.

Joints. Arthritis is very common in people who have lupus. It can cause pain, with or without swelling. Stiffness and pain may be worse in the morning. Arthritis may be a problem for only a few days or weeks, or it may be permanent. It's usually not severe.

Kidneys. Up to half of people who have lupus get kidney problems. They can be dangerous. These problems are more likely when you also have other lupus symptoms, such as fatigue, arthritis, rash, fever, and weight loss. But they can also happen when you don't have any other symptoms.

Blood. People with lupus may have dangerously low numbers of red blood cells, white blood cells, or platelets (particles that help your blood clot). Changes in blood counts may cause fatigue (with a low red cell count, also known as anemia), serious infections (with a low white cell count), or easy bruising or bleeding (with a low platelet count). But many people don't have symptoms from low blood counts. It's important to have regular blood tests to spot these problems. Blood clots are more common in people with lupus. They often happen in your legs (called deep venous thrombosis or DVT), in your lungs (called pulmonary embolism or PE), and sometimes in your brain (stroke). These clots may be tied to how your body makes things called antiphospholipid (APL) antibodies. These are unusual proteins that may make your blood more likely to clot.

Brain and spinal cord. Rarely, lupus can cause problems in your brain. You might have confusion, depression, or seizures. When it affects your spinal cord (transverse

myelitis), lupus can cause numbness and weakness.

Heart and lungs. Heart and lung problems are often caused by inflammation of the tissue covering your heart (pericardium) and lungs (pleura).

When these become inflamed, you may have chest pain, an uneven heartbeat, and fluid buildup around your lungs (pleuritis or pleurisy) and heart (pericarditis). Your heart valves and the lung itself can also be affected, leading to shortness of breath.

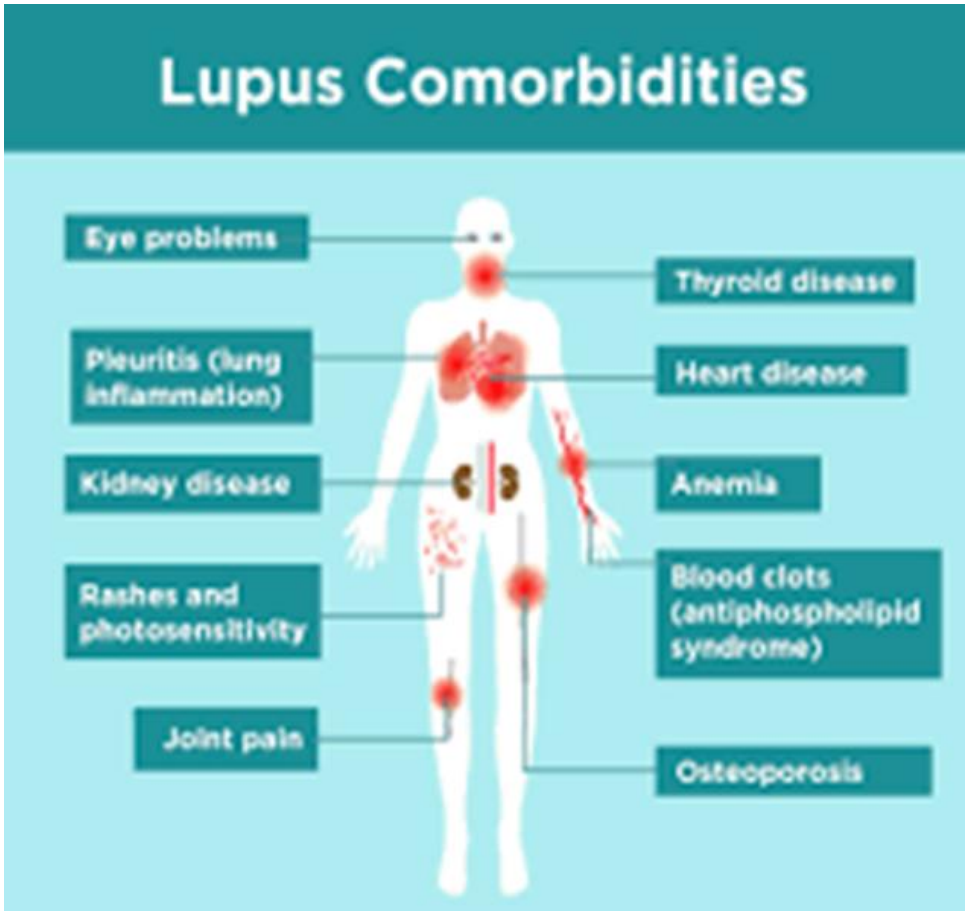

Fig 1: complication of SLE.

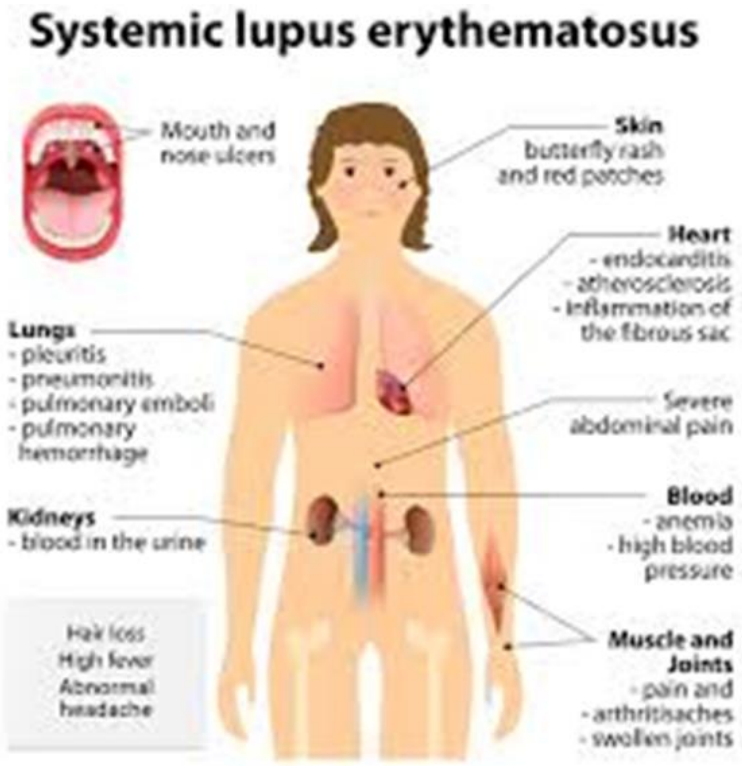

Fig 2: complication of SLE

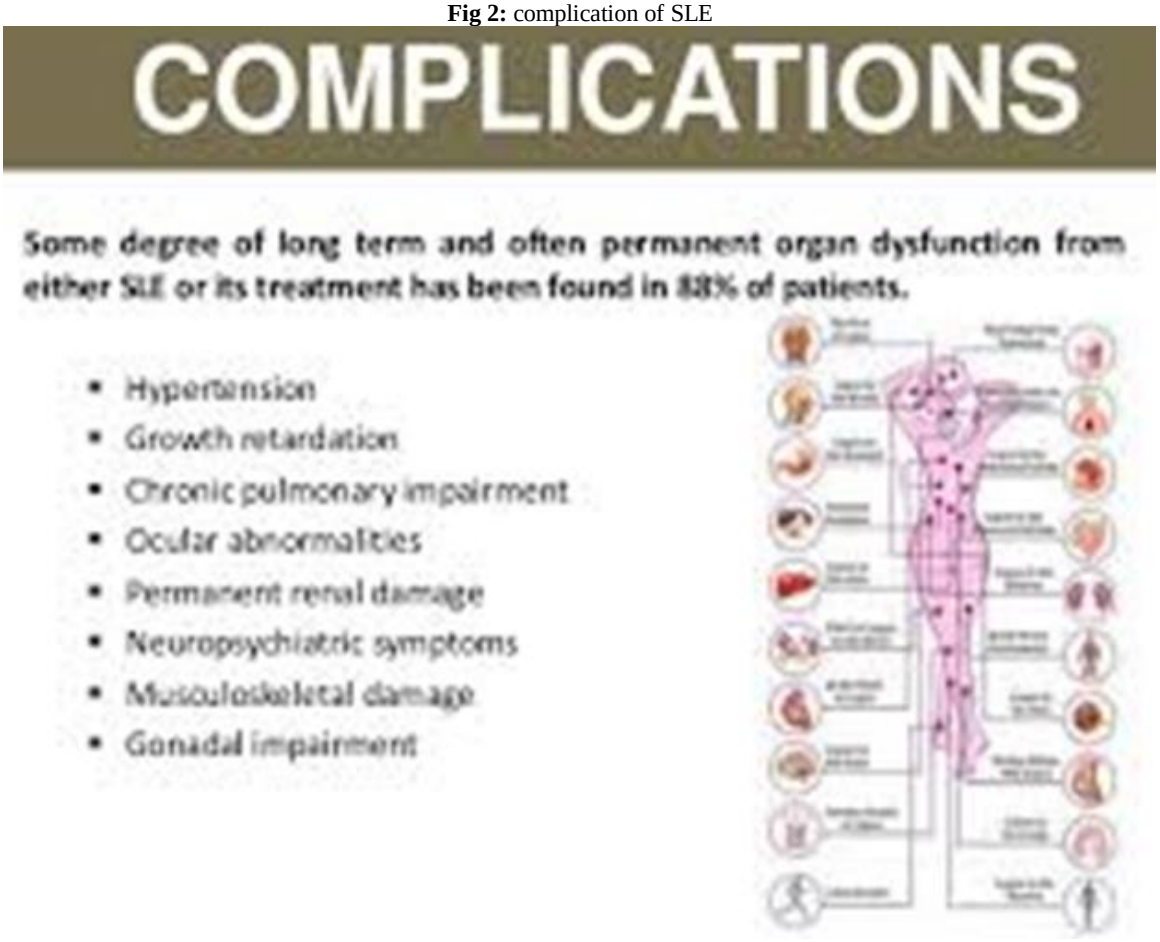

Fig 3: complication of SLE

References

1. Dall'Era M. Systemic lupus erythematosus. In: Imboden JB, Hellman DB, Stone JH. (Eds). Current Rheumatology Diagnosis and Treatment. 3rd ed. New York, NY: Mc Graw-Hill, 2013.
2. Jolly M, Pickard SA, Mikolaitis RA, Rodby RA, Sequeira W, Block JA, *et al*. Lupus QoL-US benchmarks for US patients with systemic lupus erythematosus. J Rheumatol. 2010; 37(9):1828-1833. doi:10.3899/jrheum.091443. PubMed PMID: 20716659. Abstract External.
3. Yazdany J, Yelin E. Health-related quality of life and employment among persons with systemic lupus erythematosus. Rheum Dic Clin North Am. 2010; 36(1):15-32. PubMed PMID: 20202589; Pub Med Central PM CID: PM C2833285. doi:10.1016/j.rdc.2009.12.006. Abstract External.
4. Helmick CG, Felson DT, Lawrence RC. Estimates of the prevalence of arthritis and other rheumatic conditions in the United States: Part I. Arthritis Rheum. 2008; 58(1):15-25. PubMed PMID: 18163481. doi:10.1002/art.23177. Abstract External.
5. Somers EC, Marder W, Cagnoli P. Population-based Incidence and Prevalence of Systemic Lupus Erythematosus: The Michigan Lupus Epidemiology and Surveillance Program. Arthritis Rheumatol. 2014; 66(2):369-378. doi:10.102/art.38238. PubMed PMID: 24504809; PubMed Central PMCID: PMC4198147. Abstract External.
6. Lim SS, Bayakly AR, Helmick CG, Gordon C, Easley KA, Drenkard C, *et al.* The incidence and prevalence of systemic lupus erythematosus, 2002–2004: The Georgia Lupus Registry. Arthritis Rheumatol. 2014; 66(2):357-368. doi:10.1002/art.38239. PubMed PMID: 24504808. Abstract External.
7. Ferucci ED, Johnston JM, Gaddy JR. Prevalence and incidence of systemic lupus erythematosus in a population-based registry of American Indian and Alaska Native people, 2007–2009. Arthritis Rheumatol. 2014; 66(9):2494-2502. doi: 10.1002/art.38720. PubMed PMID: 24891315. Abstract External.
8. Dall'Era M, Cisternas MG, Snipes K, Herrinton LJ, Gordon C, Helmick CG, *et al.* The incidence and prevalence of systemic lupus erythematosus in San Francisco County, California: The California Lupus Surveillance Project. Arthritis Rheum. 2017; 69(10):1996-2005. doi: 10.1002/art.40191. PubMed PMID: 28891237. Abstract External.
9. Izmirly PM, Wan I, Sahl S. The incidence and prevalence of systemic lupus erythematosus in New York County (Manhattan), New York: The Manhattan Lupus Surveillance Program. Arthritis Rheum. 2017; 69(10):2006-2017. doi: 10.1002/art.40192. PubMed PMID: 28891252. Abstract External.
10. Sacks JJ, Helmick CG, Langmaid G, Sniezek JE. Trends in deaths from systemic lupus erythematosus—United States, 1979-1998. MMWR Morbid Mortal Wkly Rep. 2002; 51(17):371-374. PubMed PMID: 12018384. Abstract External
11. Republished in JAMA. 2002; 287(20):2649-2650. PubMed PMID: 12035789.
12. Bernatsky S, Boivin JF, Joseph L. Mortality in systemic

lupus erythematosus. Arthritis Rheum. 2006; 54:2550-2557. doi: 10.1002/art.21955. PubMed PMID: 16868977. Abstract External.
13. Centers for Disease Control and Prevention, National Center for Health Statistics. Compressed Mortality File 1999-2016 on CDC WONDER Online Database. http://wonder.cdc.gov/cmf-icd10.html. Accessed, 2018.
14. Centers for Disease Control and Prevention, National Center for Health Statistics. Multiple Cause of Death, 1999-2016 on CDC WONDER Online Database. https://wonder.cdc.gov/controller/datarequest/D77. Acc essed, 2018.
15. National Library of Medicine. Medline Plus: Drug-Induced Lupus Erythematosus Website. http://www.nl m.nih.gov/medlineplus/ency/article/000446.htm. Acces sed, 2017.
16. Sammaritano LR. Pregnancy in rheumatic disease patients. J Clin Rheumatol. 2013; 19(5):259-266. PubMed PMID: 23884185. doi:10.1097/RHU.0b013e3 1829ce35f.