Disease/Medical Condition

SYSTEMIC LUPUS ERYTHEMATOSUS
(also referred to as “SLE” or “lupus”)

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Note: While this fact sheet focuses on SLE, and not on discoid/cutaneous lupus (skin and mucosa only) nor drug-induced lupus (temporary), a few italicized comments are made regarding the latter two forms of lupus.

Is the initiation of non-invasive dental hygiene procedures* contra-indicated? No

- Is medical consult advised? No (assuming patient/client is already under medical care for SLE, and pain and oral lesions are well managed)

Is the initiation of invasive dental hygiene procedures contra-indicated?** Possibly, but not typically

- Is medical consult advised? Possibly (depends on severity and level of control of the disease, including the presence/absence of oral lesions).
- Is medical clearance required? Possibly (e.g., if the disease is unstable and/or there is thrombocytopenia (low platelet count) and/or there are active oral lesions). Also, medical clearance may be required if patient/client is being treated with medications associated with immunosuppression +/- increased risk of infection (e.g., corticosteroids [e.g., prednisone], azathioprine, methotrexate, cyclophosphamide, mycophenolate mofetil, and belimumab).
- Is antibiotic prophylaxis required? No, not typically (although extended use of corticosteroids or cytotoxic drugs – particularly in the presence of leukopenia [low white blood cell count] – may warrant consideration of antibiotic prophylaxis).
- Is postponing treatment advised? Possibly, but not typically (depends on severity and level of control of the disease, including presence/absence of oral lesions, as well as medical clearance for patients/clients with thrombocytopenia or on medications associated with immunosuppression).

Oral management implications

- Cardiac valvular abnormalities are found in 25% to 50% of patients/clients with SLE. While the potential exists for bacterial endocarditis resulting from physiologic bacteremia, antibiotic prophylaxis is not typically recommended for patients with SLE-associated valvular disease when receiving invasive dental hygiene procedures.
- Patients/clients with lupus often take aspirin or other non-steroidal anti-inflammatory drugs (NSAIDs), which can increase the risk of bleeding with scaling and root planing. However, the prolonged bleeding is usually not of clinical significance.
- Prolonged bleeding due to SLE-associated thrombocytopenia is a potential problem for some patients/clients. Oral (and skin) petechiae should alert the dental hygienist to the possibility of a low platelet count.
- The dental hygienist should be alert to oral eruptions and lesions associated with medications used to treat SLE, for they may be a sign of drug toxicity.
- Physical disabilities related to arthritis and myalgia may necessitate customized positioning during dental hygiene procedures.
- Daily self-care and 2- to 3-month maintenance care should be considered to control and/or prevent SLE oral manifestations.

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**Oral manifestations**

- Oral mucous membrane and lip involvement occurs in up to 25% of patients/clients. These lesions may be erythematous with white spots or radiating peripheral lines, or they may occur as painful ulcerations with a tendency to bleed. Some lesions may resemble lichen planus or leukoplakia. Petechiae may be present.

- Lip (and skin) lesions tend to flare up after sun exposure. Lip lesions may exhibit a silvery, scaly margin, similar to those seen on the skin.

- SLE is associated with xerostomia and hyposalivation, which increase the risk of dental caries. Recurrent non-infectious pharyngitis and oral ulcerations are also common. Other oral manifestations include dysgeusia and glossodynia. The tongue may show atrophy of the papillae as well as fissuring.

- As with other autoimmune diseases, compromise of the immune system (be it from the disease or the treatment) elevates the risk of periodontal disease.

- The use of corticosteroids (such as prednisone) in the treatment of SLE can lead to oral candidiasis and other oral infections as a result of immunosuppression.

- Cytotoxic immunomodulators (e.g., methotrexate, cyclophosphamide, azathioprine, and mycophenolate mofetil) may lead to side-effects, including bleeding (associated with thrombocytopenia), oral ulcerations, and stomatitis. Methotrexate can cause sore throat.

- [Some medications (e.g., hydralazine, an antihypertensive) have been associated with lupus-like eruptions.]

- [The intraoral lesions of discoid/cutaneous lupus erythematosus are very similar to the lesions of erosive lichen planus; i.e., erythematous areas with central ulceration, accompanied by white, radiating striae at the edges of lesions. However, the intraoral lesions rarely occur in the absence of skin lesions. The ulcerative and atrophic oral lesions may be painful, particularly when exposed to salty or acidic foods.]

**Related signs and symptoms**

- Systemic lupus erythematosus is an autoimmune inflammatory disease with a wide variety of clinical manifestations. In SLE, the body produces antibodies to components of the cell nucleus. The deposition of these pathogenic antibodies and associated immune complexes in various tissues and organs results in inflammation and vasculopathy.

- SLE can affect the joints, skin, mucosa, muscles, brain, lungs, kidneys, digestive tract, heart, blood vessels, and lymphatics. Females are much more likely to develop SLE than males, and persons of African descent are affected more than Caucasians. The usual age at onset is 15–40 years, although SLE may begin at any age. Prevalence in the general Canadian population is about 0.15% (i.e., 1 in 700 Canadians). The “classic picture” of SLE is that of a young woman with polyarthritis and a butterfly-shaped rash across the bridge of the nose and over the cheeks. However, the presentation of SLE varies widely from mild to severe, dependent on the extent and type of organ involvement.

- Nonspecific manifestations include malaise, fatigue, fever, and weight loss. Sensitivity to sunlight is common.

- Arthritis and arthralgia (joint pain) are the most common manifestation. Migratory arthritis of the small joints affects about 75% of patients/clients.

- The classic facial butterfly rash is found only in about one-third of persons with SLE, with a rash on the upper torso or on areas of exposed skin being more common. The rash lesions may present with itching or burning sensations, as well as areas of hyperpigmentation.

- Low red blood cell count may occur as a result of anemia of chronic disease and/or SLE-associated hemolytic anemia.
Related signs and symptoms (cont’d)

- Lung manifestations include coughing up blood and shortness of breath. Pleural effusions (fluid around the lungs) can occur.
- Renal failure, one of the most serious complications, is the best clinical indicator of poor prognosis.
- Neuropsychiatric symptoms are common and include psychosis, seizures, stroke, movement disorders, and peripheral neuropathy.
- Antimalarial drugs (e.g., hydroxychloroquine and chloroquine) are used to treat SLE-associated skin rashes and arthritis, as well to reduce hair loss, fatigue, and nose and mouth ulcers. While generally well tolerated after short-term gastrointestinal side-effects subside, patients taking these drugs on a continual basis should be seen regularly by an eye doctor to guard against rare ocular toxicity.
- Patients/clients with SLE have an increased frequency of related autoimmune disorders, including Sjögren’s syndrome (involving dry eyes and mouth) and antiphospholipid syndrome (involving clotting problems, strokes, and fetal loss). SLE may also occur with other autoimmune conditions, such as thyroiditis, hemolytic anemia, and idiopathic thrombocytopenia purpura.
- Patients/clients can have concurrent signs and symptoms of lupus and scleroderma (involving thickened skin and Raynaud’s phenomenon, which is characterized by cold sensitivity and vasospasm in the digits), called mixed connective tissue disease.

References and sources of more detailed information

- US Centers for Disease Control and Prevention  http://www.cdc.gov/arthritis/basics/lupus.htm
- US Department of Health and Human Services’ Office on Women’s Health  http://www.couldihavelupus.gov/what-is-lupus.cfm
- Lupus Canada  http://www.lupuscanada.org

* Includes oral hygiene instruction, fitting a mouth guard, taking an impression, etc.

** Ontario Regulation 501/07 made under the Dental Hygiene Act, 1991. Invasive dental hygiene procedures are scaling teeth and root planing, including curetting surrounding tissue.

Date: July 20, 2013