- **Rheumatologic and Connective tissue disorders**
- Rheumatologic (or rheumatoid) disorders include much more than “arthritis” and encompass a large group (nearly 100) of disorders that affect bones, joints, and muscles.

- Arthritis is a nonspecific term that means “inflammation of the joints.” Often arthritis is used interchangeably with rheumatism or rheumatoid arthritis (RA) to denote aches, pains, and stiffness in the joints and muscles, but these terms are not synonymous nor inclusive.

Rheumatologic disorders include (RA), osteoarthritis (OA), psoriatic arthritis (PsA), systemic lupus erythematosus (SLE), juvenile rheumatoid arthritis (JRA), scleroderma (SD), Sjögren syndrome (SS), gout, ankylosing spondylitis, Lyme disease, giant cell arteritis (GCA or temporal arteritis), and fibromyalgia syndrome (FMS).

RHEUMATOID ARTHRITIS

Rheumatoid arthritis is an autoimmune disease of unknown origin characterized by symmetric inflammation of joints, especially of the hands, feet, and knees. The severity of the disease varies widely from patient to patient and fluctuates over time within the same patient. Disease onset usually occurs between ages 35 and 50 years. RA is more prevalent in women than in men by a 3:1 ratio.

- **Oral Complications and Manifestations**
- The most significant complication of the oral and maxillofacial complex in RA is TMJ involvement, which is found in up to 45% to 75% of patients with RA.
- This may present as bilateral preauricular pain, tenderness, swelling, stiffness, and decreased mobility of the TMJ, or it may be asymptomatic.
- Periods of remission and exacerbation may occur, as with other joint involvement. Fibrosis or bony ankylosis can occur; therefore, treatment should be initiated promptly.

COMPLICATIONS



Hardened lumps that form under the skin



Inflammation of the lining of the lungs



Inflammation of the membrane surrounding the heart



Inflammation of the blood vessels



Inflammation of the white of the eye



Carpal tunnel syndrome



Colds, flu, pneumonia and other infections



Cervical Myelopathy



Osteoporosis



Lymphoma





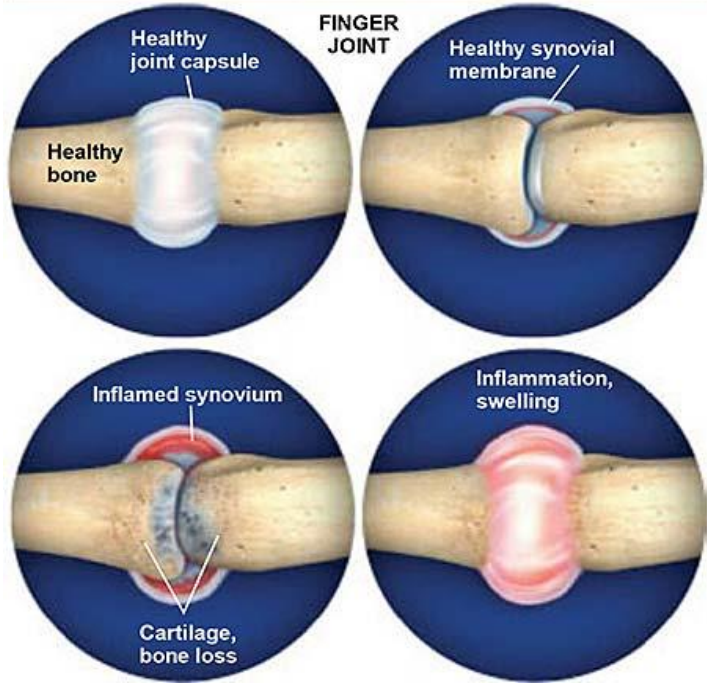




Oral Health and RA

- Periodontal disease more common in people with RA than controls
- Oral bacterium, *Porphyromonas gingivalis*, may be the connection
  - Associated with autoantibodies (CCP)
  - Could be part of causal pathway
  - Many ongoing studies of role in RA

Rosenstein ED et al. Inflammation 2004;28:311-8



- Clinically, patients may present with tenderness over the lateral pole of the condyle, crepitus, and limited opening. Radiographic changes initially may show increased joint space caused by inflammation in the joint.

- Later, these inflammatory changes progress to erosive degenerative changes and changes in size and shape of the joint and can involve both the condyles and the fossa. A potential dental complication is the development of an anterior open bite, caused by destruction of the condylar heads and loss of condylar height

- An additional complication that may be seen in patients with RA is severe stomatitis that occurs after the administration of drugs such as gold compounds, penicillamine, or immunosuppressive agents.

- Stomatitis may be an indication of drug toxicity and should be reported to the physician.
- Treatment for this problem should include consideration for changing the offending drug and palliative mouth rinses, diphenhydramine elixir, or a topical emollient such as Orabase.

STOMATITIS

Stomatitis currently is a more specific diseases of the oral mucosa.

Stomatitis

- Acute Necrotizing Ulcerative Stomatitis
- Aphthous Stomatitis
- Gangrenous Stomatitis
- Herpetic Stomatitis
- **Oral Mucositis**

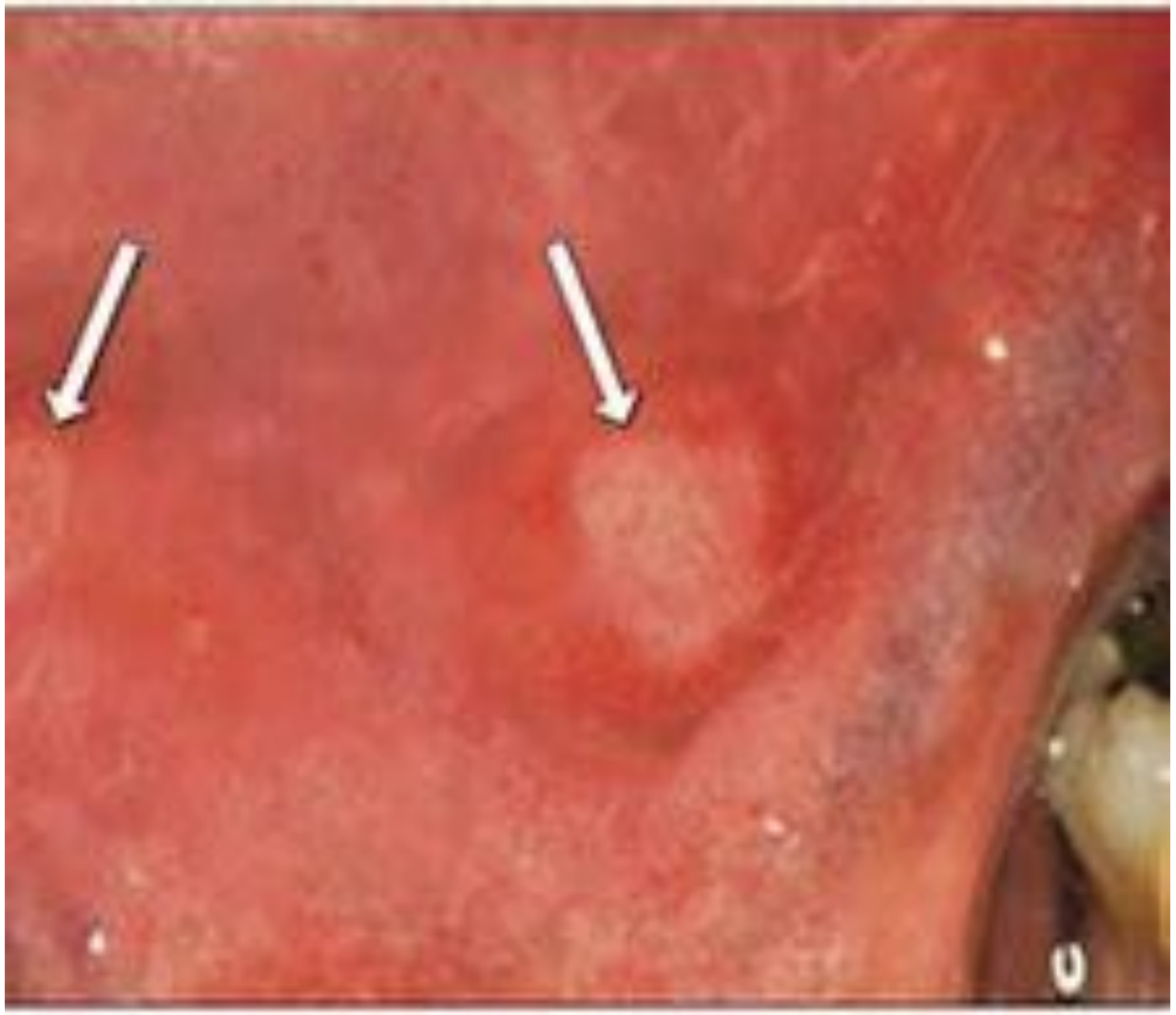




Causes of stomatitis

- Chemotherapy
- Radiotherapy
- Loose-fitting dental prosthetics
- Trauma
- Poor dental hygiene
- Smoking
- Hematologic malignancies (stomatitis develops at 2to 3 times the rate of solid tumor)
- Infection (viral , fungal ,and bacterial)
- Dehydration
- Medications





. Two discrete minor aphthous ulcerations (arrows) involving the
al mucosa with well-defined margins, a yellow fibrinous base, and
ematous periphery.

- **Dental management:**

- **1- Patient Evaluation and Risk Assessment**
- a- Evaluate and determine whether rheumatoid or joint disorder exists.
- b- Obtain medical consultation if disease is poorly controlled or undiagnosed or if the diagnosis is uncertain.

- **2- Drugs**
- **a- Analgesics:** If patient is taking aspirin or another NSAID or acetaminophen, be aware of dosing and the possibility that pain may be refractory to some analgesics; dosing and analgesic choices may need to be modified in consultation with the physician.

- **b- Antibiotics:** Provide antibiotic prophylaxis if needed in accordance with ADA (2015) guidelines. (Patients who are taking gold salts, penicillamine, sulfasalazine, or immunosuppressive agents are susceptible to bone marrow suppression, which can result in anemia, agranulocytosis, and thrombocytopenia.)

- **c- Anesthesia:** No issues
- **d- Allergy**: Allergic reactions or lichenoid reactions are possible in patients taking many medications.

- **3- Bleeding:** Excessive bleeding may occur if major surgery is performed on patients who take aspirin or other NSAIDs. Bleeding usually is not clinically significant and can be controlled with local hemostatic measures. (only patient who is taking both aspirin and a corticosteroid may be at greater risk for bleeding**).**

- **4- Chair position:** Ensure comfortable chair position. Consider shorter appointments, and use supports as needed (e.g., pillows, towels).(The patient also may be more comfortable in a sitting or semisupine position, as opposed to a supine one

- **5- Devices:** Patients who have a prosthetic joint replacement should be managed according to ADA (2003) guidelines (mentioned later in the lecture).

- **6- Investigations**: Obtain blood cell count with differential if surgery is planned for patients taking gold salts, penicillamine, antimalarials, or immunosuppressives. If patient is taking corticosteroids—secondary adrenal suppression is possible.

- **7- Emergencies:** If surgery is performed, supplemental techniques may be necessary to control bleeding.

- **8- Follow-up:** Monitor dental and periodontal health; routine follow-up evaluation is appropriate.
- **Management of Patients with Prosthetic Joints Undergoing Dental Procedures:**
- **Clinical Recommendation:**
- 1- Generally, patients with prosthetic joint implants, prophylactic antibiotics are not recommended before dental procedures to prevent prosthetic joint infection.
- 2- patients with a history of complications associated with their joint replacement surgery who are undergoing dental procedures that include gingival manipulation or mucosal incision, prophylactic antibiotics should only be considered after consultation with the patient and orthopedic surgeon.
- * To assess a patient's medical status, a complete health history is always recommended when making final decisions regarding the need for antibiotic prophylaxis.

- **Reasons for that above Recommendation:**
- 1- There is evidence that dental procedures are not associated with prosthetic joint implant infections.
- 2- There is evidence that antibiotics provided before oral care do not prevent prosthetic joint implant infections.
- 3- There are potential harms of antibiotics, including risk for anaphylaxis, antibiotic resistance, and opportunistic infections such as Clostridium difficile.
- 4- The benefits of antibiotic prophylaxis may not exceed the harms for most patients.
- **5-** The individual patient's circumstances and preferences should be considered when deciding whether to prescribe prophylactic antibiotics prior to dental procedures.

- **High-Risk Patients with Prosthetic Joints:**

- 1- Immunocompromised or Immunosuppressed Patients
- • Inflammatory arthropathies: rheumatoid arthritis; systemic lupus erythematosus; disease-, drug-, or radiation-induced immunosuppression
- 2- Other Patients
- • Insulin-dependent (type 1) diabetes
- • First 2 years after joint replacement
- • Previous prosthetic joint infections
- • Malnourishment
- • Hemophilia

- **Suggested Antibiotic Prophylaxis Regimens**
- 1- Patients Not Allergic to Penicillin: Cephalexin, Cefradine, or Amoxicillin
- • 2 g orally 30 minutes to 1 hour before the dental procedure.
- 2- Patients Not Allergic to Penicillin and Unable to Take Oral Medications: Cefazolin or Ampicillin
- • Cefazolin 1 g or ampicillin 2 g intramuscularly or intravenously 30 minutes to 1 hour before the dental procedure.
- 3- Patients Allergic to Penicillin: Clindamycin
- • 600 mg orally 30 minutes to 1 hour before the dental procedure.
- 4- Patients Allergic to Penicillin and Unable to Take Oral Medications: Clindamycin
- • 600 mg intravenously 30 minutes to 1 hour before the dental procedure.