



Periodontology- fourth stage



Second semester-Periodontal Treatment of Medically Compromised Patients Lec.12-Part2

By assistant lecturer: Reham Adnan Radhi
Department of Periodontology
College of dentistry
University of Basrah

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Hemorrhagic Disorders

- Patients with a history of bleeding problems caused by disease or drugs should be managed to minimize the risks of hemorrhage. Identification of these patients through the health history, clinical examination, and clinical laboratory tests is important. Health questioning should cover:
 - (1) the history of bleeding after previous surgery or trauma.
 - (2) past and current drug history.
 - (3) history of bleeding problems among relatives.
 - (4) illnesses associated with potential bleeding problems.
- **Clinical examination** can detect jaundice, ecchymosis, petechiae, hemorrhagic vesicles, spontaneous gingival bleeding, and gingival hyperplasia.
- **Laboratory tests** include bleeding time, tourniquet test, complete blood cell count, prothrombin time (PT), partial thromboplastin time (PTT), and coagulation time.

- The main inherited coagulation disorders include hemophilia A, hemophilia B, and von Willebrand disease.
- ✓ *Hemophilia A* results in a deficiency of coagulation factor VIII.
- ✓ *Hemophilia B* (i.e., Christmas disease) results in a deficiency of factor IX.
- ✓ *Von Willebrand disease* results from a deficiency of von Willebrand factor, which mediates adhesion of platelets to the injured vessel walls and is required for primary hemostasis.

- ✓ Not all coagulation disorders are hereditary. **Liver disease** affects all phases of blood clotting because most coagulation factors are synthesized and removed by the liver. **Long-term alcohol abusers** or **chronic hepatitis patients** often demonstrate inadequate coagulation.

Periodontal treatment can be performed in patients with coagulation disorders, provided that sufficient precautions are taken. Probing, scaling, and prophylaxis usually can be done without medical modification. However, more invasive treatment, such as local block anesthesia, root planing, or surgery, should be considered only after consultation with a physician.

Thyroid and Parathyroid Disorders

✓ Hyperthyroidism

Hyperthyroidism can cause tachycardia and other arrhythmias, increased cardiac output, and myocardial ischemia

- Patients with **thyrotoxicosis** and those with inadequate medical management should not receive periodontal therapy until their condition is stabilized.
- Patients with a history of hyperthyroidism should be carefully evaluated to determine the level of medical management, and they should be treated in a way that limits stress and infection.
- Medications such as **epinephrine and other vasopressor amines** should not be given to patients with thyrotoxicosis or poorly controlled thyroid disorders.

□ Hypothyroidism

- Patients with *hypothyroidism* require careful administration of sedatives and narcotics because of the potential for excessive sedation.

□ parathyroid disease

- Routine periodontal therapy can be provided to patients with parathyroid disease after the disorder has been identified and the proper medical treatment given.
- patients who have not received medical care may have significant renal disease, uremia, and hypertension.

Blood Dyscrasias

■ Leukemia

Altered periodontal treatment for patients with leukemia is based on their enhanced susceptibility to infections, bleeding tendency, and effects of chemotherapy. **The treatment plan for leukemia patients is as follows:**

1. Refer the patient for medical evaluation and treatment.
 2. Before chemotherapy, a complete periodontal treatment plan should be developed with a physician.
 3. Periodontal debridement (i.e., scaling and root planing) should be performed and thorough oral hygiene instructions given if the patient's condition allows. Twice-daily rinsing with 0.12% chlorhexidine gluconate is recommended after oral hygiene procedures.
 4. periodontal surgery should be avoided if possible.
 5. Antibiotic therapy is frequently the treatment of choice, combined with nonsurgical or surgical debridement as indicated.
- ✓ **During the acute phases of leukemia, patients should receive only emergency periodontal care.**

Renal Diseases

- The patient in chronic renal failure has a progressive disease that ultimately may require kidney transplantation or dialysis. It is preferable to treat the patient before transplantation or dialysis.

✓ The following treatment modifications should be made:

1. Consult the patient's physician.
2. Monitor BP; patients in end-stage renal failure are usually hypertensive.
3. Check laboratory values: PTT, PT, bleeding time, and platelet count; hematocrit; blood urea nitrogen (do not treat if <60 mg/dL); and serum creatinine (do not treat if <1.5 mg/dL).
4. Eliminate areas of oral infection to prevent systemic infection.
5. Drugs that are nephrotoxic or metabolized by the kidney should not be given (e.g., phenacetin, tetracycline, aminoglycoside antibiotics).
6. Acetaminophen may be used for analgesia and diazepam for sedation. Local anesthetics such as lidocaine are usually safe.

Liver Diseases

- Major causes of liver disease include **drug toxicity, cirrhosis, viral infections** (e.g., hepatitis B, hepatitis C), **neoplasms, and biliary tract disorders**.
- Because the liver is the site of production of most clotting factors, excessive bleeding during or after periodontal treatment can occur in patients with severe liver disease.
- Many drugs are metabolized in the liver, and liver disease alters normal drug metabolism.

❖ **Treatment recommendations for patients with liver disease include the following:**

1. Consultation with the physician concerning the current stage of disease, risk of bleeding, potential drugs to be prescribed during treatment, and required alterations to periodontal therapy.
2. Screening for hepatitis B and C.
3. Laboratory values for prothrombin time and partial thromboplastin time.
4. Laboratory values for INR.

Infectious Diseases

- ❖ Because many infectious diseases are occult in nature and medical histories are often inaccurate or incomplete, all periodontal patients should be treated as though they have an infectious disease. Protection of patients, clinicians, and office staff requires use of universal (standard) precautions for all patients, maximizing prevention of infection and cross-contamination. An example of these diseases are hepatitis, human immunodeficiency virus (HIV) and acquired immunodeficiency syndrome (AIDS), and tuberculosis.

Hepatitis

- Six distinct viruses that cause viral hepatitis have been identified: hepatitis A, B, C, D, E, and G viruses. These forms of hepatitis differ in their virology, epidemiology, and prophylaxis.
- *Hepatitis A virus (HAV) and hepatitis E virus (HEV)* produce self-limited infections with no associated chronic liver disease. These viruses are primarily transmitted by the fecal-oral route

- **Hepatitis B virus (HBV)** infection can result in chronic liver disease and a chronic carrier state. Percutaneous or permucosal injury with contaminated instruments or needles is the most common route of infection in the dental office. The HBV vaccine is recommended for all health care workers.
- **Hepatitis D virus (HDV)** is a defective virus that requires the presence of HBV for its survival, replication, and infectivity.
- **Hepatitis C virus (HCV)** is probably the most serious of all viral hepatitis infections because of its high chronic infection rate. Only 15% of patients infected with HCV recover completely; 85% develop chronic HCV infection, which dramatically increases the risk of cirrhosis, hepatocellular carcinoma, and liver failure.
- **Hepatitis G virus (HGV)** is a ribonucleic acid (RNA) virus, and its epidemiology and virology are not fully understood and its known to be transmitted via blood.

- ***Transfusion-transmitted virus (TTV)*** was first identified in 1997 and is common in the general population. The virus is often present in patients with hepatitis and chronic liver disease. Similar to HGV, TTV may not cause a specific form of hepatitis. Evidence indicates that TTV can be transmitted through the blood (e.g., transfusions), by a fecal-oral route, and from mother to child.

AIDS

- AIDS is characterized by impairment of the immune system. The human immunodeficiency virus (HIV) was isolated in 1984 as the causative agent or virus of AIDS.
- Most of the patients develop long lasting acute illness with flu - like symptom last for 10-14 days with enlarged lymph nodes, night sweat, weight loss, fever, malaise and chronic diarrhea,

❖ oral manifestation characterized by oral hairy leukoplakia and oral candidacies, necrotizing ulcerative gingivitis on periodontitis (NUG or NUP).

✓ **Periodontal management of AIDS patients involves:**

- Using full barrier techniques.
- Care in use of all sharp instruments.
- proper sterilization.
- Do not use ultrasonic instrumentation.

Tuberculosis

- The patient with tuberculosis should receive only emergency care, the patient's physician should be consulted regarding infectivity and the results of sputum cultures for *Mycobacterium tuberculosis*.
- When medical clearance has been given and sputum culture results are negative, the patient can be treated normally.
- Any patient who gives a history of poor medical follow-up (e.g., lack of yearly chest radiographs) or shows signs or symptoms indicative of tuberculosis should be referred for evaluation.
- Adequate treatment of tuberculosis requires a minimum of 18 months, and thorough posttreatment follow-up should include chest radiographs, sputum cultures, and a review of the patient's symptoms by the physician at least every 12 months.

Bibliography

- *Newman and Carranza's Clinical Periodontology, THIRTEENTH EDITION*

Thank You!

