

Pacific Protocols for the Dental Management of Patients with HIV Disease

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I. Medical Assessment of HIV Infected Patients:

Medical assessment HIV infected patients, relative to their safe dental treatment, is primarily based upon current laboratory test values.

“Significant Laboratory Tests” are listed below, along with their relevance to the patient’s health.

“Critical Laboratory Test Values”, the values at which a change in dental management is appropriate, is listed in the next section.

The “Frequency of Laboratory Tests” is also outlined and is primarily dependent on the patient’s CD4 T-helper cell count.

If you feel the patient needs a more through medical evaluation, then they should be referred to their physician. Such an evaluation/physician consult is seldom necessary relative to dental treatment planning. Appropriate and timely laboratory tests, along with a current health history, are almost always adequate to identify any problems and safely manage the patient.

Significant Laboratory Tests

The laboratory tests listed below provide important information relative to the HIV infected patient’s overall health. All, except CD4 and viral load, can be gotten by ordering a "Complete Blood Count (CBC) with a differential".

The next section “Critical Laboratory Test Values,” outlines their impact on dental management.

CD4, T-helper Cell Count

Measures the number of T-helper cells. These cells stimulate the immune system to fight infections. As their numbers go down, the risk of infection goes up.

CD4 – CD8 ratios

CD4 cells, as mentioned above, are T-helper cells. CD8 cells are T-suppressor cells. As this ratio goes down, essentially by a decrease in the number of CD 4 cells, the risk of infection goes up.

Viral load/Plasma HIV-1RNA

This measurement reveals the number of copies of the virus per milliliter of blood. Ideally, there would be zero detectable copies (virus). As the viral load goes up, indicating the virus is replicating at an increasing rate, the incidence of secondary problems increases. However, even the highest number of copies has no impact on the provision of dental care.

CBC with differential

Platelets: Platelets are necessary, along with other factors, for blood to clot. An important concern in HIV-infected patients is low platelets (thrombocytopenia) (see critical laboratory test values). If this occurs the risk of bleeding may be so severe as to delay any elective and, at times, even emergency therapy, until the platelets can be replaced.

White count: The white cells in the body are designed to do a variety of things including fight infections. As the white count decreases (leukopenia), the risk of infection increases.

Absolute neutrophils: The neutrophils are a special class of white cells which are also important in fighting infection. If their numbers decrease, the risk of infection increases.

Hematocrit: The hematocrit is the percentage of whole blood that is red cells. In most cases of anemia the hematocrit will decrease.

Hemoglobin: Hemoglobin is the oxygen carrying component of the red blood cells. In certain types of anemia it is possible to have an adequate number of red blood cells, but inadequate amount of hemoglobin and, therefore, a decreased capacity for the blood to carry oxygen.

Red Blood Cell Count: Red blood cell count measures the number of red blood cells per cubic mm of blood. A decrease in number means an inadequate number of red blood cells (anemia). This leads to an inadequate ability to carry oxygen. The patient becomes easily fatigued and is a poor healer. A low red blood cell count is usually reflected in a low hematocrit.

Critical Laboratory Test Values

These lab test values represent critical information relative to dental management. All, except CD4 and viral load, can be gotten by ordering a "Complete Blood Count (CBC) with a differential".

White Blood Count (total)

Less than 2,000 (Granulocytopenia) (Normal values: 4,000-10,000 cells/mm³). Low counts are a cause for concern because the body becomes more susceptible to infection. Consider a therapeutic regimen of antibiotics concurrently with invasive procedures or delay elective dental procedures until white count improves.

Absolute Neutrophils

Less than 1,000 (Neutropenia) – Consider therapeutic regimen of antibiotics concurrently with invasive procedures. Delay elective dental procedures until white count improves.

Platelets

Less than 60,000 (Thrombocytopenia) (Normal values: 150,000-450,000 cells/mm³) Consult with physician and recommend intervention to boost platelets prior to invasive procedures. Physician may elect to give platelet infusion or administer prednisone to increase platelet count. The dentist must receive laboratory confirmation of platelet count immediately (1-2 days) before invasive procedure. Delay elective dental procedures until platelet count improves. Platelet count should be above 60-80,000, depending on invasiveness (risk of bleeding) and extent of planned procedure.

Hematocrit (%) (HCT)

Less than 10% – Consult with physician (Normal values: female 37-47%, male 42-52%) – consider red cell transfusion, at the recommendation of the physician, for invasive procedures. Low values are an indicator of anemia.

Hemoglobin (HGB)

Less than 10 (Normal values: female 12-16g/dL, male 14-18g/dL) – consult with physician – consider red cell transfusion, at the recommendation of the physician, for invasive procedures.

Red Blood Cell (RBC)

Less than 1.0 million/mm³. (Normal values: female 4-5 million/mm³, male 4-6 million/mm³). Consult with physician - consider red cell transfusion at the recommendation of a physician, for invasive procedures. Low values are an indicator of anemia.

CD4 T-Lymphocytes (Helper cells) (absolute)

Less than 50 (normal values 590-1120 cells/mm) – Evaluate patient for severe opportunistic disease. Usually there is no problem with routine dental care. If white count is expected to increase, then you may consider delaying elective dental procedures until white count improves. Emphasize good oral care and have them contact you immediately if oral problems start.

Viral Load

As noted, viral load does not have an impact on dental treatment planning. The number of viral copies is indicative of disease, but any modification of dental treatment would be based on the other above laboratory test results and not on the viral load.

Suggested Frequency of Obtaining Lab Reports

Laboratory tests are important to monitor the patient's health. The suggested frequency of tests is listed below and is based on the patient's prior CD4 test results. Current laboratory test results are very important for some dental procedures, for example those associated with significant bleeding or dental infection. At the same time, clinical judgment is appropriate; most dental procedures should not be delayed just because the laboratory results are older than ideal.

CD4 Above 200

Obtain a lab report minimally every 6 months, or as performed by primary care physician.

CD4 Less than 200

Obtain a lab report minimally every 3 months, or as performed by primary care physician.

Any CD4 count – all patients

Inform all patients that you would like to be sent a copy of their laboratory reports any time a test is done, in order to keep their dental records current. Doing so will insure that no unknown medical problems will impact their dental care and will help in keeping their dental care progressing smoothly.

Use good clinical judgment

Evaluate each patient on a case-by-case basis. Use the above recommendations as general guidelines. Proper and timely patient care, especially urgent care, may require flexibility with critical values. Keep current on your patient's medical care and antiretroviral therapy. Your knowledge of their medical status, just like your knowledge of all of your patients' medical status, will insure their safest and most efficient dental care.

II. Suggested Drug Management of Common Oral Conditions

Oral Candidiasis (erythematous, pseudomembraneous, hyperplastic)

Rx Mycelex troche, 10 mg (clotrimazole)
Disp: (70) seventy tabs
Sig: Dissolve one tab in mouth 5 times a day

For resistant cases, use systemic antifungal

Rx Nizoral, 200 mg (ketoconazole)
Disp: (28) twenty-eight
Sig: Take one tab per day
Refill x 2

or

Rx Diflucan, 200 mg (fluconazole)
Disp: (28) twenty-eight
Sig: Take one tab per day

Angular Cheilitis

Rx Mycolog cream
Disp: (15) fifteen grams
Sig: Apply to corners of mouth 4 times a day

Note: Consider antifungal therapy when the patient is recommended for antibiotic treatment.

Herpes Simplex Virus (HSV)

Rx Valacyclovir 500 (Valtrex[®])
Disp: (28) twenty-eight
Sig: Take 1 tablet two times per day

Rx Acyclovir, 200 mg (Zovirax)
Disp: (70) seventy tabs
Sig: Two tabs three times per day

Herpes Zoster Virus (HZV)

Rx Acyclovir, 200 mg
Disp: (140) one hundred forty tabs
Sig: Two tabs every 3 hours for up to 10 tabs/day

Recurrent Aphthous Ulceration (RAU)

Mild - (few lesions present in accessible area of mouth)

Rx Lidex ointment in Orabase, 50:50
Disp: (30) thirty gms
Sig: Apply to oral lesions 4-6 times a day

Moderate to Severe – (or for lesions in inaccessible areas such as tonsillar pillars, soft palate, or oropharynx regions)

Rx Dexamethasone elixir, .5 mg/5ml
Disp: 200 ml
Sig: Rinse and gargle with ½ oz 4-6 times a day

In some cases of very severe or persistent RAU consider systemic prednisone. This should be done only in consultation with patient's physician. In fact you may recommend systemic prednisone therapy as the treatment and the physician will do the prescribing and managing.

Rx Prednisone 5 mg
Disp: 87
Sig: Take 4 tabs a.m., 4 at noon for 7 days, then reduce dose by 1 tablet a day over next 7 days until O

Rx Solumedrol dose pack
Disp: 1
Sig: Take as directed on package

HIV- Related Periodontal Diseases:

HIV-Gingivitis (Marginal Gingival Erythema)

Rx Chlorhexidine Gluconate, .12% (Perio Gard) or (Peridex)
Disp: 16 oz
Rinse with ½ oz twice a day

HIV-Acute Necrotizing Ulcerative Gingivitis (ANUG), or Necrotizing Ulcerative Periodontitis (NUP) (formerly HIVPeriodontitis)

Rx Metronidazole, 500 mg
Disp: (21) twenty-one tabs
Sig: One tab three times a day

Rx Augmentin, 500 mg
Disp: (24) twenty four
Sig: One tab three times a day

or

For severe or resistant cases

Rx Clindamycin, 300 mg
Disp: (21) twenty one tabs\
Sig: One tab three times a day

Palliative Treatment for Oral Lesions

Rx Xylocaine 2% viscous
Disp: 45 ml
Sig: Rinse with two teaspoons as needed for pain

Rx Baking soda and hydrogen peroxide
1 teaspoon baking soda in cup of solution that is ½ water and ½
3% hydrogen peroxide.

Useful Internet Resources:

www.hivdent.org/main The best overall site for HIV dental care information.
www.critpath.org/daac/standards.html Learning modules for all aspects of HIV dental care.

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