

HUMAN IMMUNODEFICIENCY VIRUS (HIV)/OTHER RETROVIRAL INFECTIONS AND IMMUNODEFICIENCIES.

Developed by Angelo Gaffo, M.D. and Martin Rodriguez, M.D.

HIV/GENERAL:

1. [Reveille JD](#). The changing spectrum of rheumatic disease in human immunodeficiency virus infection. *Semin Arthritis Rheum*. 2000 Dec; 30(3):147-66.

Comprehensive description of the epidemiology, pathogenesis, clinical presentation and treatment of different rheumatic conditions associated with HIV infection.

2. Rodriguez M, Kilby JM. Retrovirus-Associated Rheumatic and Inflammatory Disorders. In Koopman WJ, Moreland LW. *Arthritis and Allied Conditions*. 15th ed. Lippincott, Williams and Wilkins; 2005.

This is a complete comprehensive review on the topic.

HIV/HAART:

3. [Calabrese LH](#), [Kirchner E](#), [Shrestha R](#). Rheumatic complications of human immunodeficiency virus infection in the era of highly active antiretroviral therapy: emergence of a new syndrome of immune reconstitution and changing patterns of disease. *Semin Arthritis Rheum*. 2005 Dec; 35(3):166-74.

This article includes a combination of case presentations, clinical data and personal experience from the authors regarding the changing pattern of autoimmune complications of HIV in the setting of HAART.

4. [Marquez J](#), [Restrepo CS](#), [Candia L](#), [Berman A](#), [Espinoza LR](#). Human immunodeficiency virus-associated rheumatic disorders in the HAART era. *J Rheumatol*. 2004 Apr; 31(4):741-6.

A study describing the clinical characteristics of 75 HIV- infected patients receiving HAART with musculoskeletal manifestations. Points towards the changing pattern of the musculoskeletal involvement in the era of HAART, with more common manifestations being infections and malignancies.

HIV/VASCULITIS:

5. [Calabrese LH](#). Infection with the human immunodeficiency virus type 1 and vascular inflammatory disease. *Clin Exp Rheumatol*. 2004; 22(6 Suppl 36):S87-93.

Comprehensive review on the association between HIV and Vascular inflammation. Describes two novel patterns of disease: multiple aneurysms in HIV-infected children and large vessel aneurismal disease in adults, mainly from Sub-Saharan Africa.

6. [Johnson RM](#), [Barbarini G](#), [Barbaro G](#). Kawasaki-like syndromes and other vasculitic syndromes in HIV-infected patients. *AIDS*. 2003 Apr; 17 Suppl 1:S77-82.

*The authors propose a classification based on the strength of the association between HIV and different vasculitides. In the first category are the incidental cases, probably unrelated to the HIV background. Here are included: temporal arteritis, Takayasu's disease, Behcet's syndrome, Churg-Strauss syndrome, Wegener's granulomatosis, and Henoch-Schonlein's purpura. The second category includes hypersensitivity drug reactions. In the third category are the vasculitides secondary to infections like *Toxoplasma gondii*, *Pneumocystis carinii* and cytomegalovirus. Finally, the authors describe a more solid association between HIV and Primary angiitis of the Central Nervous System, Erythema elevatum diutinum, Microscopic Polyangiitis and Kawasaki-like syndromes (here they present a case report).*

HIV/DILS-SJOGREN'S:

7. [Kazi S](#), [Cohen PR](#), [Williams F](#), [Schempp R](#), [Reveille JD](#). The diffuse infiltrative lymphocytosis syndrome. Clinical and immunogenetic features in 35 patients. *AIDS*. 1996 Apr; 10(4):385-91.

An epidemiological, clinical, serologic and immunogenetic study of 35 consecutive patients with this syndrome taken from a cohort of 10000 outpatients infected with HIV1.

8. [Panayiotakopoulos GD](#), [Aroni K](#), [Kyriaki D](#), [Paikos S](#), [Vouyioukas N](#), [Vlachos A](#), [Kontos AN](#), [Kordossis T](#). Paucity of Sjogren-like syndrome in a cohort of HIV-1-positive patients in the HAART era. Part II. *Rheumatology (Oxford)*. 2003 Oct; 42(10):1164-7.

Despite its small patient numbers, this paper proposes that the HIV-associated Sjogren's-like syndrome (or Diffuse infiltrative lymphocytosis syndrome) has decreased significantly since the initiation of HAART.

HIV/ANTIPHOSPHOLIPID SYNDROME:

9. Ramos-Casals M, Cervera R, Lagrutta M, Medina F, Garcia-Carrasco M, de la Red G, Bove A, Ingelmo M, Font J; Hispanoamerican Study Group of Autoimmune Manifestations of Chronic Viral Disease (HISPAMEC). Clinical features related to antiphospholipid syndrome in patients with chronic viral infections (hepatitis C virus/HIV infection): description of 82 cases. Clin Infect Dis. 2004 Apr 1; 38(7):1009-16.

Description of the clinical characteristics of a group of patients that includes 31 cases of HIV with antiphospholipid syndrome. Points out that the classic manifestations of the antiphospholipid syndrome may be rare in patients with HIV that instead present with bone involvement (mainly asymptomatic avascular necrosis of the bone) and cutaneous necrosis.

HIV/SPONDYLOARTHROPATHY:

10. Winchester R, Bernstein DH, Fischer HD, Enlow R, Solomon G. The co-occurrence of Reiter's syndrome and acquired immunodeficiency. Ann Intern Med. 1987 Jan; 106(1):19-26.

The original description of the association between reactive arthritis and HIV infection.

11. Ntsiba H, Lamini N. Is inflammatory joint disease in HIV-infected patients a form of spondyloarthropathy? Joint Bone Spine. 2004 Jul; 71(4):300-2.

Performed in a country where HIV is the leading cause of arthritis, this study applied two sets of standardized criteria for spondyloarthropathy in 83 HIV-infected patients with aseptic arthritis. Only one case fulfilled a clinical definition for spondyloarthropathy, questioning the possible association of HIV-related arthritis with seronegative spondyloarthropathies in African patients.

12. Cuellar ML, Espinoza LR. Human immunodeficiency virus associated spondyloarthropathy: lessons from the Third World. J Rheumatol. 1999 Oct; 26(10):2071-3.

A concise review of the specific characteristics of spondyloarthropathy in HIV infected patients in different parts of the world.

HIV/POLYMYOSITIS:

13. Johnson RW, Williams FM, Kazi S, Dimachkie MM, Reveille JD. Human immunodeficiency virus-associated polymyositis: a longitudinal study of outcome. *Arthritis Rheum.* 2003 Apr 15; 49(2):172-8.

Description of 13 patients with HIV-associated Polymyositis. In general, patients appear to have a milder form of disease compared to those with idiopathic autoimmune myositis. A high proportion of cases had spontaneous resolution of their myopathy, respond well to glucocorticoids and an overall good prognosis.

HIV/PEDIATRICS:

14. Martinez-Rojano H, Juarez Hernandez E, Ladron De Guevara G, del Carmen Gorbea-Robles M. Rheumatologic manifestations of pediatric HIV infection. *AIDS Patient Care STDS.* 2001 Oct;15(10):519-26.

In this Mexican cohort, 26 HIV-positive children were followed for one year and compared for the development of rheumatic manifestations with a similar number of HIV-negative children born from seropositive mothers. A total of 5 (19%) children had rheumatic manifestations including Raynaud's syndrome, vasculitis, infections and arthralgias. Also, laboratory abnormalities in this special patient population are described.

15. Schuval SJ, Bonagura VR, Ilowite NT. Rheumatologic manifestations of pediatric human immunodeficiency virus infection. *J Rheumatol.* 1993 Sep;20(9):1578-82.

First reported group of HIV-infected pediatric patients in which rheumatic manifestations were investigated. In general mild rheumatic symptoms were found (mainly arthralgias and myalgias), with an important prevalence of parotitis (20%). Laboratory abnormalities including high frequency of hypergammaglobulinemia and circulating immune complexes are reported.

HTLV-1:

16. Nishioka K, Sumida T, Hasunuma T. Human T lymphotropic virus type I in arthropathy and autoimmune disorders. *Arthritis Rheum.* 1996 Aug; 39(8):1410-8.

A thorough review of the clinical and immunopathologic concepts of HTLV1 as an etiology for arthritis and autoimmune disorders, as well as a review of the respective clinical syndromes.

17. [Kato T, Asahara H, Kurokawa MS, Fujisawa K, Hasunuma T, Inoue H, Tsuda M, Takahashi S, Motokawa S, Sumida T, Nishioka K.](#) HTLV-I env protein acts as a major antigen in patients with HTLV-I-associated arthropathy. *Clin Rheumatol.* 2004 Oct; 23(5):400-9.

Trying to elucidate the pathogenesis of HTLV-1 associated arthropathy (HAAP), this study finds evidence of the expression of viral mRNA in synoviocytes of patients with HAAP. T-cells that were reactive to HTLV-1 expressed proteins were also found in the synovium.

PRIMARY IMMUNODEFICIENCIES:

18. [Weiler CR, Bankers-Fulbright JL.](#) Common variable immunodeficiency: test indications and interpretations. *Mayo Clin Proc.* 2005 Sep; 80(9):1187-200.

Excellent review of the etiology, diagnosis and interpretation of the laboratory testing for the Common Variable Immunodeficiency. Besides, good sections on the clinical presentation and therapeutic implications.

19. [Cooper MD, Lanier LL, Conley ME, Puck JM.](#) Immunodeficiency disorders. *Hematology (Am Soc Hematol Educ Program).* 2003:314-30.

Covers extensively the basic and clinical aspects of the defects in B-cell development, antibody deficiencies and severe combined immunodeficiencies.

20. [Arkwright PD, Abinun M, Cant AJ.](#) Autoimmunity in human primary immunodeficiency diseases. *Blood.* 2002 Apr 15; 99(8):2694-702.

The authors describe the association between primary immunodeficiency syndromes and autoimmune conditions, including insights into the pathogenesis of this associations and rationale for management.