

Rheumatologic manifestations of HIV/AIDS

Commentary

There has been a decline in the prevalence of HIV/AIDS and a decline in AIDS-associated deaths. However, the World Health Organization estimates that roughly 35 million people are living with HIV. Globally, there are still approximately 2 million new infections per year. While mortality has decreased in the era of highly active antiretroviral therapy, AIDS morbidity has increased because individuals are now living with chronic disease and the effects of treatment.

Rheumatologic conditions can be a significant cause of morbidity in people living with HIV/AIDS. This is thought to be the results of depletion of CD4+ cells, inversion of the CD4+/CD8+ T-lymphocyte ration, and development of antibodies that favour immune complex formation (through constant exposure to HIV antigens).

The past 10-15 years, the concept of chronicity of HIV infections has lead to increasing knowledge that depletion of memory CD4+ T-cells in the gut causes persistent activation of the innate immune system and stimulates/maintains inflammation [1,2].

The management of rheumatic diseases in the HIV-infected individual is similar to that of noninfected individuals. Greater caution should be used with immunosuppressive medications and individuals should be closely monitored for opportunistic infections. Particular care must be used if CD4 values are lower than 200 cells/uL.

Presentations/forms of rheumatologic diseases in HIV/AIDS

HIV arthralgias

This affects approximately 5% of HIV-infected people, commonly its duration is less than 6 weeks and it can be oligoarticular or polyarticular. The Synovial fluid cultures are negative and the results for antinuclear antibody and rheumatoid factor are negative.

Avascular necrosis

Both HIV itself (especially with very low CD4 cell

counts) and Anti-HIV treatment are risk factors for AVN. Patients receiving glucocorticoids for management of rheumatic condition with HIV may be at higher risk.

Fibromyalgia

Chronic widespread pain due to fibromyalgia has been shown to be very common in HIV/AIDS patients and it's frequency is increasing dramatically as with any other chronic disease process. This is treated as with any other Fibromyalgia patient.

Spondylarthritis

There was a profound increase in undifferentiated spondylarthritis is associated with the AIDS epidemic of the 1980's. The presentation tends to be predominantly arthritis (lower extremity) and enthesitis with less spondylitis. Psoriasis and psoriatic arthritis can be severe, but improve with ant-HIV therapy. Treatment is similar to that for noninfected individuals. TNF inhibitors have been used successfully in many patients.

Rheumatoid arthritis

This tends to remit in HIV-infected patients because of decreased CD4 T cells. New-onset RA is rare in the context of HIV infection. With HAART, immune reconstitution phenomenon may worsen RA that was quiescent during the low CD4-state or allow new onset of disease.

Serological abnormalities

Patients with HIV have multiple serological abnormalities: hypergammaglobulinemia, positive rheumatoid factor, antineutrophil cytoplasmic antibodies, antinuclear antibodies, anticardiolipin antibodies. HIV testing should be considered in patients being worked up for any possible connective tissue disease. The antibodies are rarely of clinical significance. The combination of HIV and ageing has led to what is now known as "immunosenescence" [3,4].

Systemic lupus erythematosus

This is similar to the situation with RA mentioned above. It is generally quiescent in patients with HIV infection but may become activated during immunosenescence.

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Diffuse infiltrative lymphocytosis syndrome (DILS) (Sjogren's-like syndrome)

This affects 3%-4% of HIV-infected people, but has decreased dramatically with advances in HIV treatment. It presents with bilateral enlargement of parotid, submandibular or lacrimal glands and is typically present with sicca symptoms (dry mouth, dry eyes) but has negative Antirodantica antibody results (and pathological features distinct from Sjogren's syndrome). Extraglandular involvement may include pneumonitis, cranial nerve VII palsy, peripheral neuropathy, polymyositis (PM), renal tubular acidosis, hepatitis and lymphoma. In an HIV-infected patient with parotid enlargement, also consider malignancy and granulomatous disease as a possibility.

Vasculitis

The full range of vasculitis diseases is seen in HIV-infected individuals, with presentations similar to those in non-infected individuals, but this is rare. Polyarteritis nodosa (PAN) has been reported, as well as antineutrophil cytoplasmic antibody-associated small vessel vasculitis, Henoch-Schoenlein purpura and Bechet's disease. Anti-HIV therapy induced cutaneous vasculitis has been reported.

Myopathy

Polymyositis (PM) in the context of HIV infection is similar to idiopathic (PM) Prevalence is reported as high as 0.25%, but Anti-Jol and other Anti-MSA antibodies are absent. The condition may have normal electromyography and biopsy results; thus, clinical evaluation is important (maintain index of suspicion). It responds well to standard therapy for PM, as in non-HIV patients. Other myopathies include inclusion-body myositis and others. In the differential diagnosis for myopathy in HIV-infected patients, also consider infection (pyomyositis) or rhabdomyolysis associated with anti-HIV meds.

Rheumatologic manifestations of HIV therapy

The integrase inhibitor, raltegravir can be associated with severe rhabdomyolysis and acute renal failure, as can other protease inhibitors. Be watchful in patients also receiving statins for dyslipidemia. Indinavir has been associated with

adhesive capsulitis, Dupuytren's contracture, tenosynovitis and temporomandibular malfunction [5].

Musculoskeletal infections

Staphylococcus aureus is still the most common pathogen in acute musculoskeletal infection (septic arthritis, osteomyelitis, pyomyositis). Atypical mycobacterial bone and joint infections are well described in patients with advanced immunosuppression in the setting of HIV infection and may present with a more indolent picture.

Conclusion

Infection with HIV is now a chronic disease, no longer a "death sentence". Improvements in terms of early diagnosis and a multi-pronged approach to Anti-HIV therapy have extended the life span of infected people to approaching that of the general population. What was seen as Rheumatology Manifestations have now changed in scope and treatment. However, these Rheumatologic manifestations are now amplified as the population living with HIV age and therefore, like all Rheumatology diseases that brings "chronicity", "disease resistant treatments" and as well "newer diseases" like Osteoporosis, Osteoarthritis, etc. Chronicity, as with any disease, will result in the inevitable increase in Fibromyalgia which is increasing in the general population and becoming harder to treat. Immunosenescence with the development of serological abnormalities is "an unknown quantity" in terms of Rheumatology manifestations and shall be a key to future diagnoses, investigations and treatments.

References

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