

Rheumatological Complications of Emerging Infectious Diseases

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ABOUT THE STUDY

Emerging Infectious Diseases (EIDs) are a significant global health concern, and they continue to pose challenges to public health systems worldwide. These diseases are caused by new or previously unknown pathogens that cross species barriers or adapt to new environments, leading to outbreaks or epidemics. While the primary focus of research and healthcare efforts during EID outbreaks is often on the immediate impact of the infectious agent, it is essential not to overlook potential long-term consequences and complications, including rheumatological manifestations. Rheumatological manifestations are conditions that affect the musculoskeletal system, including joints, bones, muscles, and connective tissues. They can arise as a result of the infectious agent itself, the body's immune response to the infection, or a combination of both.

Rheumatological manifestations of COVID-19

COVID-19, caused by the novel coronavirus SARS-CoV-2, emerged in late 2019 and quickly became a pandemic. Initially thought to primarily affect the respiratory system, evidence soon emerged suggesting that COVID-19 could also lead to various rheumatological complications. Some of the most commonly observed rheumatological manifestations of COVID-19 include:

Arthralgia and myalgia: Joint pain (arthralgia) and muscle pain (myalgia) have been reported in COVID-19 patients, often presenting during the acute phase of the infection. It is believed that these symptoms may result from the inflammatory response triggered by the virus.

Rheumatoid arthritis flares: Patients with pre-existing rheumatoid arthritis may experience disease flares during COVID-19 infection due to the virus's impact on the immune system and heightened inflammation.

Guillain-Barré Syndrome (GBS): GBS is a rare but severe autoimmune disorder affecting the peripheral nervous system. Several cases of GBS have been reported following COVID-19 infection, suggesting a potential link between the virus and the development of this neurological condition.

Multisystem Inflammatory Syndrome in Children (MIS-C): Children infected with SARS-CoV-2 can develop MIS-C, a condition characterized by widespread inflammation, including joint pain and swelling, similar to Kawasaki disease and toxic shock syndrome.

Rheumatological manifestations of chikungunya

Chikungunya is a mosquito-borne viral disease caused by the Chikungunya Virus (CHIKV). The disease has garnered attention due to its rapid spread and the severity of its symptoms, particularly its impact on the musculoskeletal system. Common rheumatological manifestations of Chikungunya include:

Polyarthralgia: Chikungunya is notorious for causing severe joint pain, particularly in the wrists, ankles, and small joints of the hands and feet. This polyarthralgia can be debilitating and persist for weeks to months after the acute infection.

Tenosynovitis: Inflammation of the tendon sheaths, known as tenosynovitis, is a frequent complication of Chikungunya infection. It can cause pain and limited mobility in affected areas.

Arthritis: Some patients may develop chronic arthritis following Chikungunya infection, with joints remaining swollen, painful, and stiff for an extended period.

Rheumatological manifestations of zika virus

Zika virus, primarily transmitted through mosquito bites, garnered global attention during the outbreak in the Americas. While Zika infection is often asymptomatic or causes mild flu-like symptoms, it has been associated with rheumatological complications, including:

Arthralgia: Similar to Chikungunya, Zika infection can lead to joint pain, particularly in the small joints of the hands and feet. The joint pain can persist for weeks to months after the acute infection.

Guillain-Barré Syndrome (GBS): As with COVID-19, Zika virus infection has been linked to an increased risk of developing

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Guillain-Barré Syndrome, an autoimmune disorder affecting the peripheral nervous system.

Myositis: In some cases, Zika infection has been associated with inflammation of the muscles (myositis), leading to muscle pain and weakness.

Rheumatological manifestations are increasingly recognized as potential complications of emerging infectious diseases.

COVID-19, Chikungunya, and Zika virus infection have all demonstrated various rheumatological effects, including joint pain, arthritis, myalgia, and neurological disorders.

Recognizing these manifestations is crucial for appropriate diagnosis, management, and follow-up care of patients affected by emerging infectious diseases.