Q: What drugs have been identified as possible causes of aseptic meningitis?

A: The classic definition of meningitis is inflammation of the meninges, the membranes covering the brain and spinal cord. Meningitis can result from bacterial, viral, fungal, and protozoal infections as well as non-infectious causes such as drugs, tumors, rheumatoid arthritis, or systemic lupus erythematosus (SLE). With the advent of newer technology, specimens that were once considered negative based on Gram staining are now being confirmed as viral meningitis, thus negating some of the previously suspected cases of aseptic meningitis. Symptoms of meningitis include headache, fever, neck stiffness, muscle aches and pains, rash, and abdominal pain. They may develop after only a few doses or up to two years after commencing therapy and generally resolve from one to fourteen days after discontinuing treatment. Unfortunately, aseptic meningitis is primarily a diagnosis by exclusion. CSF findings are usually negative; however there may be an increase in white blood cells and CSF protein. The only consistent method of diagnosing aseptic meningitis is by excluding all other causes and establishing a causal relationship between drug and disease. Drug-induced aseptic meningitis (DIAM) is a rare adverse reaction that has been associated with several drug categories. It is considered to be an inflammatory reaction resulting from deposition of immune complexes in meningeal tissue. Nonsteroidal anti-inflammatory drugs (NSAIDs) are considered responsible for most cases of DIAM. Ibuprofen is the most commonly implicated of this group; however, other NSAIDs have also been associated with the disorder. Risk factors include existing connective tissue diseases, especially SLE. This is of particular concern as up to 80% of patients with lupus are treated with NSAIDs. Trimethoprim-sulfamethoxazole (TMP-SMX) is the most common antimicrobial associated with DIAM. There are also reports related to administration of isoniazid, cephalosporins, gentamicin, ciprofloxacin, penicillin, and metronidazole. Intravenous immunoglobulin (IVIG) has also been described as a potential cause of this condition. Patients presenting with meningitis-like symptoms and negative CSF findings should always be evaluated for possible DIAM.

References:

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