Rhueumatoid arthritis case study examples

Science, Genetics

Sandy most likely has Rheumatoid arthritis. The signs of arthritis that Sandy has include early morning stiffness of the small joints of the hands and the recent swelling up of both her knees.

The erythrocyte sedimentation rate at 23mm/hr is high and indicates an on-going inflammation. Also the Rheumatoid factor is positive. Most patients with Rheumatoid arthritis have a positive Rheumatoid factor assay.

There is actually no test result that is pathognomonic of rheumatoid arthritis. Diagnosis is made using a combination of clinical features, laboratory investigations and imaging features.

Non-steroidal anti-inflammatory drugs can be prescribed. One type is the non-selective Cyclooxygensae inhibitors. They interfere with prostaglandin synthesis by inhibiting the cyclooxygenase enzyme. The result is a reduction in the swelling and pain. Example is Ibuprofen. Selective Cyclooxygenase II inhibitor can also be used. They do not induce gastric ulcers like the non-selective Cyclooxygenase inhibitors because they have no action on gastric prostaglandin production. Example is celecoxib.

Other analgesics that can be used include acetaminophen, opiates, codeine and tramadol.

Glucocorticoids have a potent anti-inflammatory effect. They reduce the inflammation of the affected joints. Complications of prolonged steroid use are multisystem. In the Gastrointestinal system, peptic ulcer and gastric irritation are recognized complications. In the blood, it can cause leukocytosis and neutrophilia. In the immune system, it suppresses delayed

hypersensitivity reaction and inhibits cytokine action. In the musculoskeletal system, it can cause osteoporosis and pathological fractures. It can also lead to avascular necrosis o the head of the femur. In the eye, it can cause cataracts and glaucoma.

Duchenne Muscle Dystrophy

Symptoms consistent with Duchenne Muscle dystrophy include the change in his gait and posture to a more awkward one as opposed to his normal active and agile self. Also, Jimmy has been climbing on himself to get up. This symptom is peculiar to Duchene Muscular Dystrophy.

Duchenne Muscular dystrophy is the most common muscular dystrophy in the world. It is a genetic disease that leads to mutation in the Dystrophic molecule. Susceptible muscles are prone to mechanical injuries and they undergo a repeated cycle of necrosis and regeneration. The disease not only affects skeletal muscles, all muscles of the body can be affected.

A DNA testing was done for Jimmy’s sisters so that it would be known if they also carry the mutated gene. A small number of females carry the gene and they can pass it to their offsprings in future.

Supportive care involves a multidisciplinary team of primary care physicians, neurologists, pulmonologists, cardiologists, endocrinologists among other specialists. Daily joint exercises prevent the setting in of contractures because of muscle disuse. Braces to the joints especially ankle-foot orthosis improve joint mobility and delays dependency on wheelchairs. Genetic counseling is the only intervention that is available for preventing the

disease. Maternal genetic testing can be done to determine if a mother is a carrier. Chorionic Villous sampling and amniotic cell analysis can also be done to provide prenatal diagnosis of the condition.

Corticosteroids especially prednisolone has been shown to improve the course of the disease. However, prolonged medication is still discouraged because of the side effects on the body system. The prognosis of the condition is variable. Some patients go on to live a near normal life while others are wheelchair bound for life. Some patients become wheelchair bound as early as their third decade of life while others do not become wheelchair bound until their eight decade of life.

References

Michelle, Mellion (2010). Dystrophinopthies Treatment and Management. Medscape Reference. http://emedicine. medscape. com/article/1173204-treatment#showall