**Compartment Syndrome: An Unusual Course for a Rare Disease**

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**Abstract**

This article covers a case of Compartment Syndrome in a 45 year old male. This disease is rare and therefore has not been reported in literature and has not had many diagnoses and treatments to work off of. This paper will discuss the appearance, physiological findings, diagnosis, and patient management for this patient’s case of Compartment Syndrome. It can be concluded that the best way to diagnose and treat Compartment Syndrome is early detection and diagnosis.

**Introduction**

Compartment Syndrome is defined as a very serious condition that involves compression of nerves, blood vessels in a confined space in the body. This can cause serious damage to muscle & nerve systems and can compromise circulation and function of tissues. The case report in this article is regarding a 45 year old male that was admitted to the hospital for fever, headache, muscle pain, and hemorrhaging rashes. After the fifth day of hospitalization, the patient also experienced oral and nasal bleeding. The patient had an obvious hemorrhaging rash that showed major edema (swelling) on his forearm, but doctors did not have enough information about Compartment Syndrome to diagnose the disease.

**Materials and Methods**

Doctors started treatment by medicating the patient with oral ribavirin and intravenous ceftriaxone. These are used as anti-viral and anti-infection medications. Doctors also performed tests known as enzyme-linked immunosorbent asay – or ELISA tests – that can detect Crimean-Congo hemorrhagic fever virus, and found that the patient tested positive on both the fifth day and the tenth day of his hospital stay. Hemorrhaging and swelling also greatly increased for the first three days of his hospital visit so doctors administered platelet transfusions to the patient. Doctors decided to not perform any sort of surgical procedure on the patient for fear of fatal blood loss.

**Results**

After treatments and medical support, the patient had greatly improved after two full weeks. Swelling of his forearm was almost completely reduced back to normal and hemorrhaging was no longer occurring. His fever went back down to normal and no longer showed signs of illness. After three months, the patient went back to the hospital for a follow-up. The muscles in his forearm and hand showed atrophy (loss or decrease in muscle mass) and his thumb showed mutation due to nerve damage. His response to pain and pinprick sensation in his hand had decreased and his motor movements in his hand and forearm had also decreased to 3/5 distally. Along with motor movements, his muscle stretch reflex had decreased also.

**Discussion**

Doctors and scientists believe that an earlier diagnosis could have prevented much of the damage that occurred to this patient. Compartment Syndrome can pose the threat of irreversible muscle damage, amputation of a limb, and can even be life-threatening. Prompt diagnosis and treatment is absolutely essential. Through this case study, scientists have proposed other treatments – physical examinations to detect early signs of Compartment Syndrome and percutaneous monitoring of patients who experience any type of incompartmental pressure. They studied the disadvantages of surgical decompression for Compartment syndrome, which led them to believe that patient could experience thrombocytopenia (loss of blood platelets), irregular blood clotting, and possibility of a highly transmittable infection being spread. Doctors and scientists also proposed that minimal amount of blood sampling would be advantageous so patient doesn’t lose more blood than what is already occurring through hemorrhaging. Again, early detection of Compartment Syndrome is the key to reducing potential of the terrible effects it can have on the human body.

**Bibliography**

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