
Treating Gas Gangrene with Hyperbaric

Gas Gangrene is a painful condition in which the body's soft tissues are destroyed by toxins produced by bacteria. It is usually caused by a microbe called *Clostridium perfringens*, which is implicated in 80 to 90 percent of all cases of gas gangrene. This disease is usually associated with surgery or with massive traumas, such as that found following car accidents. Gas Gangrene is characterized by profound blood poisoning, extensive swelling, massive death of tissue and the production of gas in the affected areas. Initial symptoms include pain and tenderness in the wound area, mild fever and rapid heartbeat. The patient may develop life-threatening anemia, kidney failure, jaundice, brain dysfunction, and heart toxicity.

Clostridium perfringens is an anaerobic bacteria, that thrives in the absence of oxygen. In gas gangrene the initial injury results in hypoxia, or lack of oxygen in the tissues. The bacteria thrive under these conditions, and produce toxins that cause swelling. The swelling further diminishes the supply of both blood and oxygen to the area. That keeps the immune system from functioning properly, which in turn allows the disease to spread and produce more toxins. It can spread at a rate of 1-2 cm per hour.

While antibiotics and surgery are the main forms of treatment for gas gangrene, HBOT is a significant part of any treatment. It works against the clostridial bacteria by killing the organisms and deactivating the toxins. Although HBOT does not kill all clostridia, it is bacteriostatic and bactericidal. The high levels of oxygen lead to the death or inactivation of the microbes. Dead tissue create toxins that can keep hbot from being most effective. Surgery or debridement of the wound is necessary. HBOT help to define the line between viable tissue and dead tissue. A clear line of demarcation develops between tissue which helps the surgeon clean the wound of non-viable tissue and that which can be saved. HBOT and surgical procedures can save the lives of gravely ill patients,.

Treatment for gas gangrene should include debridement/surgery, antibiotics and HBOT. Extensive evidence in the medical literature supports the use of HBOT as a part of an overall treatment plan for gas gangrene.