

Chem 412 Seminar

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Guillain-Barré Syndrome: A Mechanistic Study

Abstract

Guillain-Barré (ghee-yan bah-ray) syndrome is a disorder in which the body's immune system attacks parts of the nervous system. The first symptoms of this disorder include varying degrees of weakness or tingling sensations in the legs. In many instances, the weakness and abnormal sensations spread to the arms and upper body. These symptoms can increase in intensity until the muscles cannot be used at all and the patient is almost totally paralyzed. In these cases the disorder is life threatening - potentially interfering with blood pressure, heart rate, and breathing - and is considered a medical emergency. The patient is often put on a respirator to assist with breathing and is watched closely for problems such as abnormal heartbeat, infections, blood clots, and high or low blood pressure. Most patients however, recover from even the most severe cases of Guillain-Barré syndrome, although some continue to have minor problems.

Guillain-Barré syndrome can affect anybody. It can strike at any age and both sexes are equally prone to the disorder. The syndrome is rare, however, afflicting only about one person in 100,000. Usually Guillain-Barré occurs a few days or weeks after the patient has had symptoms of a respiratory or gastrointestinal viral infection. Occasionally pregnancy, surgery, or vaccinations will trigger the syndrome. The disorder can develop over the course of hours or days, or it may take up to 3 to 4 weeks. Most people reach the stage of greatest weakness within the first 2 weeks after symptoms appear, and by the third week of the illness, 90 percent of all patients are at their weakest.

References

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