

## Case Study: Galloping Pneumonia

Roland went to the emergency room on Tuesday after relapsing with what he thought was the flu. The attendant taking his history reported that the patient, in his early 30s had previously never been admitted to a hospital, took no prophylactic medication and was in good health. The previous week Roland reported that he had had the flu. He had been running a fever, had a cough and had painful joints. He had started feeling better the previous Wednesday, but by Saturday he was coughing and feverish again. During the exam by the doctor he noted Roland had a productive (reddish brown sputum), rattling cough. His respiratory rate was elevated, 32 breaths per minute. His pulse slightly elevated at 110 beats per minute. The oximeter revealed blood oxygen saturation levels were low, 88%. With auscultation, definite crackling sounds were heard in both lungs. The patient was feverish with a temperature of 39.7<sup>o</sup> C (103.5<sup>o</sup> F). The doctor requested a chest x-ray, sputum culture and several blood tests including a blood culture.

The chest x-ray showed consolidation in both lungs. The complete blood count indicated the patient's leukocyte (white blood cells that fight infection) count was suppressed. The BUN (blood urea nitrogen) was elevated indicating the kidneys were not functioning optimally. The Gram stain of the sputum revealed red blood cells, white blood cells (~45 per field of view) and numerous clusters of long chains of spherical bacteria. The actual blood culture results would not be complete for 24 hours.

The doctor diagnosed bacterial pneumoniae possibly caused by *Streptococcus pneumoniae*. Roland was admitted to the ICU (intensive care unit) where he was immediately provided supplemental oxygen. Pending the results of the blood culture, the doctor prescribed a broad spectrum antibiotic. Roland's condition worsened over the next 12 hours. He required a ventilator for pulmonary support and he ultimately succumbed to the infection. The post mortem identified a highly virulent form of Group A Streptococcus. The cause of death was listed as pulmonary bleeding, acute respiratory failure caused by Group A Streptococcus bacteremia with the added complications of kidney and heart failure. Roland died from what is commonly called galloping pneumonia. A bacterial pneumonia caused by any of a number of bacteria. The common characteristic in galloping pneumoniae is the rapid invasion of the body by bacteria through the lungs and the subsequent failure of organs due to bacterial metabolism.

The early diagnosis and treatment of this form of bacterial pneumonia is critical for a successful patient outcome. Even young, healthy individuals can succumb to this disease if treatment is delayed or the disease misdiagnosed. Jim Henson, creator of the Sesame Street Muppets died of galloping pneumonia. Henson told his doctor on Saturday that he was feeling 'flu-ish'. He was admitted to the hospital the following Tuesday and died shortly thereafter.