

Case 18.1

A 63-year-old retired Army colonel was transferred to Shands via helicopter from a community hospital in Ft. Myers. He had a high fever, cough, and chest pain. He had presented to his local physician 3 days previously complaining of fever, headache, malaise, and vague respiratory symptoms. Over the next 3 days, his symptoms became progressively worse and he now had considerable difficulty breathing, and was disoriented and lethargic. Chest x-rays indicated patchy alveolar infiltrates on both the right and left sides, indicative of a pneumonia. He had been sent to the local Ft. Meyers hospital, and they had referred him to Shands.

His white cell count was 12,000 with 70% neutrophils. The "sputum" sample consisted of only thin, watery secretions. A gram stain of the sputum showed few neutrophils, some mononuclear cells, no epithelial cells, and a very few poorly staining gram negative bacteria. Multiple routine cultures of blood and sputum were negative. His wife tells you that he is a very heavy drinker and that he has smoked two packs of cigarettes a day since he was 14 years old.

Question 1. What organisms are causes of community-acquired bacterial pneumonia?

- 1: *Nocardia asteroides*
- 2: *Pneumococcus*
- 3: *Legionella pneumophila*
- 4: *Staphylococcus aureus*
- 5: *Chlamydia psittaci*
- 6: *Corynebacteria diphtheria*
- 7: *Klebsiella pneumonia*
- 8: *Mycoplasma pneumonia*
- 9: *Salmonella typhi*
- 10: *Rhodococcus equi*

- A) 1, 2, 3, 4, 8 B) 2, 3, 5, 6, 9 C) 5, 7, 8, 9, 10 D) 2, 3, 4, 7, 8

Question 2 The smoking and drinking are risk factors for which of the following?

Question 3. On the basis of the gram stain, culture, and clinical picture you decide that the patient has Legionnaire's disease. Why did the laboratory not grow the organism from the sputum? How can you grow this organism?

Question 4. What are the sometimes catastrophic consequences of Legionnaire disease

Question 5. What is Pontiac fever?

Case 18.2

A 63-year-old retired Army colonel was transferred to Shands via helicopter from a community hospital in Ft. Myers. He had a high fever, cough, and chest pain. He had presented to his local physician 3 days previously complaining of fever, headache, malaise, and vague respiratory symptoms. Over the next 3 days, his symptoms became progressively worse and he now had considerable difficulty breathing, and

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Question 2. If *Legionella* is not spread between people, where does it come from?

Question 3. If a special medium is needed to grow *Legionella* in the laboratory, how can it survive in water sources?

Question 4. What is the major virulence mechanism for *Legionella*

Question 5. What is the treatment of choice for Legionnaire disease?