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Our Ref: 2304/SAK/DJW

14 September 2018

All GPs

Via Email Only

Dear Colleague

RE: Legionella WRH MAU 13.09.2018

Dear Colleagues

Following positive Legionella results from water samples taken on Worcester MAU on 30.08.2018 we wish to make you aware of the possibility of healthcare acquired Legionella infection in patients who attended the following areas of the hospital: WRH MAU, WRH AEC, WRH A&E Majors.

The samples show high levels of *Legionella species* from multiple outlets on the WRH MAU unit. Whilst *Legionella pneumophila* has not been detected other Legionella species are capable of causing clinical disease especially in vulnerable patients.

Legionella is acquired via inhalation droplet spread (eg showers) however micro-aspiration is possible. Person to person spread has not been documented.

Possible clinical presentation:

Two distinct clinical manifestations: Legionnaires disease and Pontiac Fever.

Incubation period 2-10 days, most often 5-6 days. (rarely up to 14 days)

Both conditions present with anorexia, malaise, myalgia, headache and fever. Abdominal pain and diarrhoea are common. Legionnaire's disease is characterised by pneumonia and typically a non-productive cough. CXR findings are variable and may show patchy or focal areas of consolidation or bilateral involvement. The illness can be very severe and may ultimately progress to respiratory failure.

Pontiac Fever is a self-limited febrile illness that does not progress to pneumonia or death; cough may or may not be present. Patients recover spontaneously in 2-5 days without treatment.



Risk factors:

Age > 50, smoking, diabetes, chronic lung disease, renal disease, malignancy, immunocompromised, higher risk in male patients. Disease rare in patients aged less than 20.

Actions required:

Please be alert to the possibility of hospital acquired *Legionella* infection in any patient developing suggestive symptoms within 10 days (rarely up to 14 days) of discharge from Worcester MAU, WRH AEC, WRH A&E Majors.

Treatment options for *Legionella*:

- **Levofloxacin** and **azithromycin** are the preferred agents for the treatment of Legionnaires' disease because these agents are bactericidal, achieve high intracellular concentrations, penetrate lung tissue and are active against all *Legionella* species that cause human infection.
 - Early administration of appropriate antibiotics has been shown to decrease mortality associated with *Legionella* infection, therefore please consider use of one of these agents if clinically indicated.
 - Doses:
 - Levofloxacin 750mg once daily
 - Azithromycin 500mg once daily
 - In general, treat patients with Legionnaires' disease for a minimum of 5 days and do not stop therapy until the patient is clinically stable and afebrile for at least 48 hours. Patients with severe pneumonia or chronic comorbidities may be slow to respond to therapy and often require 7 to 10 days of treatment.
 - Transplant recipients and other immunocompromised patients are at risk for both severe infection and relapse. Please refer to hospital for intravenous antibiotics and supportive management.
 - Most patients defervesce about two to five days after starting therapy, though, in a minority, infection can be fulminant.

Diagnosis:

The in-house *Legionella* urinary antigen test will NOT detect *Legionella species*; it only detects *Legionella pneumophila* serogroup 1 .

If hospital acquired *Legionella* infection is suspected please send the following samples:

- Urine sample to exclude *Legionella pneumophila* serogroup 1.
- Sputum sample (if possible) requesting *Legionella* culture

After today, all water outlets on WRH MAU, WRH AEC and A&E majors will have point of use filters fitted. Any patients admitted AFTER this time will NOT be at risk.

This poses a low risk to staff working in the affected areas unless they have significant risk factors and exposure. If this is the case and they develop symptoms suggestive of Legionella infection they have been advised to seek medical attention.

If you have any patient clinical enquiries please discuss with the duty microbiologist, available 24/7, contactable via switchboard.

Many thanks

Best wishes.

Yours sincerely,



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