Measles

Overview

Measles is a **highly** infectious, acute viral illness spread by respiratory secretions, including aerosol transmission. The incubation period is usually 10-14 days following exposure. An initial prodrome of fever and malaise, is followed by cough, coryza and conjunctivitis, then maculopapular rash commencing on the face and upper neck before becoming generalised.

Measles is uncommon in Australia due to vaccination and subsequent herd immunity. However, in a non-immune population one case of measles can expect to result in about 18 further cases. Most cases of measles in Australia occur in non-immune individuals either returning from a measles endemic country or as a secondary case following exposure to a known case in Australia.

Diagnosis of measles

Measles should be suspected when there is a (i) compatible clinical presentation in (ii) a person with a relevant exposure or travel history when there is (iii) no history or uncertain history of existing measles immunity (i.e. measles immunisation x 2 and/or documented measles IgG).

Testing of asymptomatic individuals for evidence of measles immunity

• Measles serology: IgG

Testing of symptomatic individuals for evidence of measles infection

- Measles serology: IgG AND IgM AND
- Measles PCR: viral throat swab and first pass urine

Measles IgM is reliably detectable between 4-14 days post onset of rash. Infection can occasionally occur in vaccinated individuals, particularly if they have only received one vaccination or are immunosuppressed. Interpretation of serology in these cases can be more difficult. Measles PCR is used to confirm the diagnosis in equivocal cases and to allow strain typing of the virus.

All clinically suspected and confirmed cases of measles must be notified by telephone to the Communicable Disease Control section of the Health Protection Service.

Severe infection can be *prevented* in exposed non-immune individuals using immunization or normal human immunoglobulin, however this MUST be given within 3 and 6 days of exposure respectively to be effective.

A timely public health response is critical to limit transmission. For suspected cases of Measles, please follow the recommendations over the page.



Phone 02 5124 2932 Fax 02 5124 2815 actpathology@act.gov.au www.health.act.gov.au/services/act-pathology Gilmore Crescent Garran ACT 2605 PO Box 11 Woden ACT 2606 This overview outlines the initial steps to take in the diagnostic work-up of suspected cases of Measles to ensure rapid testing and early initiation of infection control and public health responses.

1. Contact the on-call clinical microbiologist (@ Canberra Hospital switch 512 42000)

to discuss appropriate specimen collection, and to approve and co-ordinate urgent testing.

(i) Results for urgent Measles IgM/IgG are available approximately one-two hours after receipt in the laboratory and approval by the on-call Microbiologist. Testing is routinely available Monday – Friday, however weekend testing may be available for specific cases.

(ii) Results for urgent Measles PCR are available approximately 6 hours after receipt in the laboratory and approval by the on-call Microbiologist. Testing is routinely available Monday – Friday, however weekend testing may be available for specific cases.

2. Notify Health Protection Service (ACT 6205 2155/9962 4155 (after hours)): they will help to facilitate testing, and provide advice on management of the case and contacts, pending confirmatory testing. Post exposure prophylaxis is available for Measles, but is time critical.

3. Order/collect appropriate specimens using appropriate PPE (e.g. mask, eye protection, gloves, gown)

(i) Serum for measles IgM and IgG;

AND

(ii) Viral throat swab and first pass urine for Measles PCR (specimen can be stored if not required, however early collection avoids testing delays and potential exposure of additional people at time of recollection if subsequently also required)

4. Notify the pathology collection centre (if required) in advance, to allow instigation of appropriate PPE by the collection staff and to avoid contact with other vulnerable patients in the waiting room.

For ACT Pathology, ONLY the **Canberra Hospital** (512 42816) collection centre is to be used for patients with potential airborne pathogens such as Measles, MERS-CoV and varicella-zoster. Patients should not attend other ACT Pathology Collection Centres.

5. If the patient requires hospital admission, the emergency department should be notified in advance to ensure the person is identified and promptly isolated on presentation.

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