Follow Up of Confirmed Measles Cases

Introduction

After the measles-rubella campaign in 1994, the incidence of confirmed measles declined rapidly in England Wales. The incidence remained low for many years, with most outbreaks occurring in children in unvaccinated communities and in those who had travelled abroad. (1) Localised outbreaks in young children in areas of low MMR coverage have also been reported.

In 2006, the number of cases has increased dramatically but it is unclear whether this increase represents a series of localised outbreaks or could preface the re-establishment of sustained measles transmission.

Case definition	
Confirmed	
Case positive for	detection of measles IgM in oral fluid or serum OR detection of viral RNA in any clinical sample isolation of measles virus from a clinical sample
AND	no history of measles containing vaccine within 6 weeks before onset
Epidemiologically linked	
	Case with rash and fever occurring within four weeks of contact with a confirmed case
Possible case	
Case positive for	detection of measles antigen (e.g. by IF) in clinical sample four fold rise or single high level of serum IgG

Up until 2006, when the incidence of true infection remained low, the predictive value of a laboratory confirmation was not 100% and false positive cases were occasionally observed.(2) To meet the World Health Organisation definitions, CfI would like to ensure that, wherever possible, any sporadic cases during periods of low incidence are confirmed by more than one investigation. In addition, CfI would also like to maximise the chances of finding measles RNA for genotyping from most sporadic cases and from at least one case in each outbreak. To do this the following additional investigations are recommended (see over):

1. Ramsay ME, Jin L, White J, Litton P, Cohen B, Brown D. The elimination of indigenous measles transmission in England and Wales. J Infect Dis. 2003 May 15;187 Suppl 1:S198-207
2. Ramsay M, Cohen B, Brown D. Serum IgM testing is needed in all cases of suspected measles. BMJ. 1996 Jul 27;313(7051):231.

Further investigation of confirmed measles cases

Cases confirmed by serum IgM only

- If still in hospital, request clinical specimens (throat swab, urine) for viral culture and RNA detection
- Otherwise, if within four weeks of onset, request oral fluid specimen for RNA detection

Cases confirmed by detection of viral RNA (samples other than oral fluid)

- If within 8 weeks of onset, request confirmatory oral fluid specimen for IgM detection

Cases confirmed by oral fluid IgM

- For all sporadic cases (i.e. those not linked to other confirmed cases or part of recognised outbreak) within 8 weeks of onset, request confirmatory serum (a kit can be supplied by CfI) or oral fluid for IgM detection

Cases confirmed by serum/oral fluid IgM and RNA detection

- no further follow up required

Epidemiologically-linked and possible cases

- If within 8 weeks of onset, request confirmatory oral fluid specimen for IgM and RNA detection

Investigation of linked cases

Cases that occur within two weeks of a confirmed case should be investigated early to maximise the chances of detecting viral RNA for genotyping. An oral fluid sample should be obtained within two weeks of onset, ideally within one week. Throat swabs and urine samples may also be helpful.

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Contacts details:

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Requests for kits :	Immunisation Department	020 8327 7412
Medical advice:	Mary Ramsay (020 8327 7084/5) or Kevin Brown (020 8327 6023)	