Measles exposure during pregnancy – guidance document

Date reviewed: 27/02/2024 *Version 1.2*

"Measles illness, during pregnancy, results in a higher risk of premature labour, spontaneous abortion and low birth weight infants" [1]

- Measles during pregnancy is associated with an increased risk of maternal morbidity[2].
- Measles during pregnancy is associated with a high risk of foetal loss and prematurity[3].
- Measles in late pregnancy can also lead to perinatal infection in the infant, which may be associated with a high mortality and the risk of subacute sclerosing panencephalitis[2, 4].
- There is no evidence to support an association between measles in pregnancy and congenital effects.

1. National guidance on use of human normal immunoglobulin (HNIG)[1]

National guidance recommends using HNIG for susceptible pregnant women exposed to measles. Although there is no direct evidence that this will reduce the complications of measles in pregnancy, it may attenuate disease and therefore potentially reduce the rate of complications.

Human normal immunoglobulin (HNIG) should be administered (ideally within 72 hours of exposure) to pregnant women without evidence of measles immunity who have had significant exposure to measles. Women with measles titres reported as "positive" or "weak positive" can be considered protected and do not need HNIG [1]

2. Assessing susceptibility to measles in pregnant women:

Consider susceptible those women (particularly if born after 1978) who:

- do not provide a reliable history of measles infection or
- have not received 2 doses of measles vaccine or
- who have serological evidence of lack of immunity
- are of migrant or ethnic minority groups or who come from low resource countries. Such women are less likely to have been vaccinated with MMR vaccine.

Assessing likely susceptibility in pregnant contacts should be based on a combination of age, vaccination/infection history. Women without evidence of measles immunity should be offered HNIG if they are exposed to measles.

3. Assessing exposure to measles:

An exposure is considered significant if:

- A susceptible individual is exposed to a confirmed or probable case of measles who is infectious at the time of exposure (four days before to four days after rash onset) in any of the following ways:
  - There is face to face contact of any duration.
  - An immunocompetent individual is in a room with a case for more than 15 minutes.
  - An immunosuppressed person, including pregnant women, is in the room with a case for any duration or enters a room vacated by a case within two hours of the case leaving the room.

Human Normal Immunoglobulin (usage) administration

For information on HNIG usage please refer to most recent Chapter 12: Measles Immunisation Guidelines for Ireland.

References

1. National Immunisation Advisory Committee. Immunisation Guidelines for Ireland. Chapter 12. Measles (updated February 2024). Latest version of Chapter 12 accessible at Royal College of Physicians of Ireland Website > Healthcare Leadership > NIAC > Immunisation Guidelines for Ireland (rcpi.ie)
2. Measles infection in pregnancy. Chiba ME - *J Infect* - 01-Jul-2003; 47(1): 40-4
3. Measles as a cause of fetal defects. A retrospective study of ten measles epidemics in Greenland. Jespersen CS, Lttauer J, Sagild U. *Acta Paediatr Scand.* 1977 May; 66(3):367-72.
4. Subacute sclerosing panencephalitis (SSPE) associated with congenital measles infection. Simsek E, Oztürk A, Yavuz C, Kocabay K. *Turk J Pediatr*. 2005 Jan-Mar; 47(1):58-62.
5. The rationale for the use of measles post-exposure prophylaxis in pregnant women: a review. - Manikkavasagan G - *J Obstet Gynaecol* - 01-Oct-2009; 29(7): 572-5
6. Immunoglobulin Handbook. HPA January 2007
7. Red Book 28th Edition – Report of the Committee on Infectious Diseases 2009. American Academy of Pediatrics