A CLUSTER OF RUBELLA IN MALTA, DECEMBER 2007 - JANUARY 2008

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A cluster of rubella has been identified by the Infectious Disease Prevention and Control Unit (IDCU) of Malta in the beginning of January 2008. Two men and a woman aged between 23 and 28 years were affected. The index case had onset of illness on 23 December 2007. The second case had onset of rash on 3 January and the third case displayed symptoms on 6 January 2008. Two of the three cases were laboratory-confirmed (IgM positive), the third displayed typical symptoms and was a close contact of a laboratory-confirmed case but was IgM and IgG negative. None of the affected patients had received vaccination against rubella and there was no history of recent travel abroad. All three cases were linked through a work place. Blood samples were submitted to the World Health Organization (WHO) Regional Reference Laboratory for Measles and Rubella, Luxembourg, for further investigations. None of the cases had any complications. To date no further cases have been identified.

Background

Rubella was declared a notifiable infectious disease in 1978 [1]. During the last thirty years there have been two major outbreaks of rubella in Malta. The first took place in 1985-86, at a time when rubella vaccination was only recommended to young girls, and involved 3,735 persons over two years. The second outbreak occurred in 1995, involved 416 persons, and followed a period when there had been interruptions in the availability of the combined measles, mumps and rubella vaccine (MMR). The last case of congenital rubella syndrome was also reported during that

year. Since then rubella has become uncommon. In the period 2002-2006, a total of 13 cases were reported to IDCU (Figure) with ages ranging between 10 months and 62 years (mean 17 years). A third of the cases were female.

Rubella vaccination was introduced in the national vaccination schedule (free of charge) in 1982 [2] and was initially offered to girls aged 11 to 13 years. In 1990, the MMR vaccine was introduced and vaccination was extended to all children at 15 months. In 1991, a second dose of MMR was recommended to children aged 11-12 years. In 2005, the age for the second dose of MMR was reduced to 8-9 years.

Control measures

To control the recent rubella cluster, the health authorities have recommended vaccination against rubella to the cases' work and family contacts if they were not previously vaccinated. In addition, IDCU set up an outbreak control team with the aim of enhancing the surveillance of rubella. This involved informing health-care practitioners about the outbreak to heighten the level of suspicion for any further cases and to report suspected cases of rubella and congenital rubella syndrome for further investigations. Press releases and media interviews served to raise public awareness of the importance of vaccination particularly for women of child-bearing age who were offered vaccination free of charge. The cluster was notified in the forum website of the European Union network for surveillance of vaccine-preventable diseases (EUVAC.NET).

Discussion

This cluster, although small, shows that pools of individuals susceptible to rubella infection still exist in Malta. This should raise awareness of the potential for serious complications to the unborn child, particularly since one female of child-bearing age was affected. The age distribution of the cases in this cluster shows the vulnerability of unvaccinated adults without a history of the disease.

With the current high estimated vaccination coverage rates for the first MMR dose at around 94%, rubella in children is unlikely to occur. However, uninfected individuals who were not vaccinated within the framework of the national immunisation programme in place since the 1980's, either because they were not eligible or because they defaulted, are still susceptible. Indeed, the available data from the late 1980s and early 1990s show levels of vaccine

FIGURE
Number of reported cases of rubella, Malta, 1979-2007

coverage varying between 20% and 50% for vaccination at 15 months of age and around 70% for school-based vaccination at 11-13 years. These are probably gross underestimates, however, as 4.4% of persons aged 15-39 were seronegative for rubella antibodies according to a study carried out between 1996 and 2004 [3].

The short chain of transmission of the observed rubella cases indicates that the interruption of rubella virus transmission in Malta is being maintained. Currently, the recommended age for vaccination with the first dose of MMR vaccine is at 15 months and with the second dose at 8-9 years of age.

Since rubella, together with measles, is targeted for elimination in the WHO European region [4], every effort is being made to maintain high vaccination coverage with MMR and to enhance surveillance to ensure the interruption of local transmission of these diseases.

Acknowledgements

We would like to thank Christopher Barbara and Robert Decelis at the Mater Dei Hospital Virology Laboratory for the laboratory investigations and Henrik Bang of the Statens Serum Institut for the graphic.

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This article was published on 17 April 2008.

Citation style for this article: Spiteri G, Fenech Magrin A, Muscat M. A cluster of rubella in Malta, December 2007 - January 2008. *Euro Surveill*. 2008;13(16):pii=18840. Available online: <http://www.eurosurveillance.org/ViewArticle.aspx?ArticleId=18840>