

Editorial

MMR and autism: the canard is finally buried

Sri Lanka Journal of Child Health, 2008; **37**: 107-108

(Key words: MMR, autism)

It was just about ten years ago that the first report of a possible association between the measles, mumps and rubella (MMR) vaccine and regressive development disorder or autism was published in *The Lancet*¹. That report of a possible cause and effect phenomenon of the MMR vaccine and autism led to a state of virtual mass hysteria in the West and there was general panic, particularly in the United Kingdom (UK). Parents just stopped giving the vaccine and gradually the incidence of the diseases prevented by the vaccine, particularly measles, started to rise in an alarming fashion. In fact, right up to August 2008, the incidence of childhood measles and mumps has risen progressively and disturbingly in the UK^{2,3}. The resurgence of eminently preventable diseases, particularly measles, which was a known scourge for several centuries before the advent of immunisation, was a definite catastrophe.

The march of events following the initial report of a possible association of autism with the MMR vaccine led to several statements, allegations, editorial comments and retractions in *The Lancet*. It also triggered many epidemiological studies designed to look at the problem of autism and the MMR vaccine. Just a couple of years after the initial incriminating publication, several studies found no valid relationship between MMR vaccination and autism^{4,5}. The accumulating evidence against the initial contention led to the resignation of the principal investigator of the original report from his research position⁶. In 2004, an expert review of vaccines stated that the evidence now is convincing that the MMR vaccine does not cause autism or any particular subtype of autistic spectrum disorder⁷. A Japanese study in 2005 provided incontrovertible population based evidence that MMR withdrawal had no effect on the incidence of childhood autism⁸. The authoritative Cochrane Review in 2005 found no credible evidence of an involvement of MMR with autism⁹. In September this year researchers released the latest evidence showing no association between vaccination with the MMR vaccine and autism spectrum disorders. The findings came from a study published in the Public Library of Science that examined measles virus RNA in the bowel after vaccination in children with gastrointestinal (GI) disorders and autism and in children with GI disorders alone¹⁰. In a sweeping statement this year, from the Royal College of Paediatrics and

Child Health of the UK, its President Dr. Patricia Hamilton has stated categorically that they cannot stress too strongly that all children and young people should have the MMR vaccine and that overwhelming scientific evidence shows that it is safe¹¹.

In the aftermath of the confusion caused by the general panic, even the UK judiciary was involved. A judge had to rule in favour of MMR vaccine when there was a dispute between the two parents on the administration of the vaccine to their child¹². The UK government started a multi-million pound campaign as long ago as 2001 to reassure the populace¹³ but public fears have remained¹⁴. In August this year, a joint communiqué from the Chief Medical Officer, the Chief Nursing Officer and the Chief Pharmaceutical Officer of The National Health Service of the UK earnestly appeals to all colleagues to support the MMR Catch-Up Programme to initiate urgent action needed to reduce the risk of a measles epidemic¹⁵. They have stressed that there are outbreaks reported from many areas in the UK and that the threat of a major epidemic is greatest in London.

The current scenario in the West and particularly in the UK amply demonstrates how much damage could be done to highly successful preventive programmes by misguided and utterly irresponsible conclusions derived from medical research. Parental concerns and mass resistance to a procedure which was alleged to do some harm, even in a small minority, is quite understandable. No parent, worth his or her own salt, would willingly take the risk of even the remotest possibility of their child suffering through an immunisation procedure.

In Sri Lanka, as a result of our high literacy rate and considerably higher educational levels, many parents have expressed and continue to voice concerns even regarding the measles, rubella (MR) vaccine which is routinely administered to children around the age of 3 years through the National Expanded Programme of Immunisation. The MMR vaccine is available only in the private sector and is also administered at the age of 3 years. Many parents in Sri Lanka believe that the MR vaccine is the same as MMR and are worried by the risks of autism. Those who have access to the global

electronic information super-highways have been bewildered by conflicting reports appearing in the internet regarding the MMR vaccine. Indeed, the pendulum has swung back and forth on the issue over the internet, for many years.

Current scientific evidence and authoritative statements are definitely reassuring and firmly restore confidence that there is no proven connection between autism and the MMR vaccine. Many epidemiological studies have firmly disproved even the remotest possibility of a cause and effect phenomenon with regard to the vaccine and, pervasive and regressive developmental disorders in children. The practising paediatricians of Sri Lanka and The Sri Lanka College of Paediatricians are duty bound to explain the current evidence to the parents and to bury the myth of autism and the MMR, once and for all, forever, and for good.

References

1. Wakefield AJ, Murch S, Anthony A, et al. Ileal lymphoid nodular hyperplasia, non-specific colitis and regressive developmental disorder in children. *The Lancet* 1998; **351**:637-41.
2. Savage E, Ramsay M, White J, Beard S, Lawson H, Hunjan R, Brown D. Mumps outbreaks across England and Wales in 2004: an observational study. *British Medical Journal* 2005; **330**:1119-20.
3. Available from:
http://www.immunisation.nhs.uk/Library/News/Measles_on_the_Rise_as_Vaccinations_Fall_in_the_UK_Science_study_reports.
4. Taylor B, Miller E, Farrington CP, et al. Autism and measles mumps rubella vaccine : no epidemiological evidence for a causal association. *The Lancet* 1999; **353**:2026-9.
5. Fombonne E, Chakrabarti S. No Evidence for A New Variant of Measles-Mumps-Rubella-Induced autism. *Pediatrics* 2001; **108**:e58.
6. Ramsay S. Controversial MMR-autism investigator resigns from research post. *The Lancet* 2001; **358**:1972.
7. Honda H, Shimuzu Y, Rutter M. No effect of MMR withdrawal on the incidence of autism: a total population study. *Journal of Child Psychology and Psychiatry* 2005; **46**:572-9.
8. Jefferson T, Rivetti A, Price D. Vaccines for measles, mumps and rubella in children. *Cochrane Database of Systematic Reviews* 2005. Issue 4, Art. No.CD004407.DOI:10.1002/14651858.CD004407, pub2.
9. Available from:
<http://www.medscape.com/viewarticle/580027?src=mp&spon=9&uac=60307BR>.
10. Available from:
<http://www.rcpch.ac.uk/Media/News>.
11. DeStefano F, Thompson WW. MMR vaccine: an update of the scientific evidence. *Expert Review of Vaccines* 2004; **3**:19-22.
12. Senior K. Judge rules in favour of MMR vaccine. *The Lancet Infectious Diseases* 2003; **3**:456.
13. Ramsay S. UK starts campaign to reassure parents about MMR-vaccine safety. *The Lancet* 2001; **357**:290.
14. Ramsay S. UK government tries to control MMR panic. *The Lancet* 2002; **359**:590.
15. Available from:
<http://www.immunisation.nhs.uk/publications/CMO060808.pdf>.

B J C Perera
Joint Editor