DRUG SAFETY INFORMATION No.32

Health Products Regulation Group
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Dear Healthcare Professional

RECOMMENDATIONS ON THE USE OF ROTAVIRUS VACCINES – ROTARIX® AND ROTATEQ® IN SINGAPORE

The Health Sciences Authority (HSA) has earlier informed healthcare professionals on the findings of DNA fragments of porcine circovirus 1 (PCV-1) in the rotavirus vaccine, Rotarix® and PCV1 and porcine circovirus 2 (PCV-2) DNA fragments in RotaTeq®. HSA, in consultation with the Ministry of Health (MOH) and its Expert Committee on Immunisation (ECI), would like to update healthcare professionals on the recommendations on the use of rotavirus vaccines locally.

2 Rotarix® (GlaxoSmithKline, GSK) and RotaTeq® (Merck Sharp and Dohme, MSD) are the two rotavirus vaccines licensed in Singapore since October 2005 and July 2007 respectively for the vaccination of infants six weeks and older against gastroenteritis due to rotavirus infection.

Summary of updates on Rotarix® and RotaTeq®

3 Using an advanced technology, researchers from the University of California, San Francisco (UCSF) had identified DNA fragments of PCV-1 in the rotavirus vaccine, Rotarix®. Further investigations conducted by GSK and the US FDA confirmed the presence of PCV-1 DNA fragments in the human rotavirus vaccine and its starting materials. Preliminary evidence from ongoing investigations showed that the PCV-1 DNA fragments in the final vaccine product are unlikely to cause infection in human cell lines. Current available data also suggests that there were no cases of PCV-1 infection in infants who had received Rotarix® in clinical trials.

4 While initial tests in RotaTeq® conducted by the researchers at UCSF and FDA did not show the presence of PCV DNA fragments, additional testing conducted by MSD detected the presence of PCV1 and PCV-2 DNA fragments in vaccine intermediates and PCV DNA in the final vaccine. The number of copies of these fragments in the RotaTeq® intermediates and final product lots appear to be several log-folds less than those detected in the Rotarix® intermediates and final product lots.

Information on PCV-1 and PCV-2

5 PCV-1 and PCV-2 are not derived from the pig mammal. PCV-1 is found in pigs but it has not been linked to any animal disease. PCV-2 is a variant of PCV-1 and has been known to cause illness in pigs. There is however no documentation so far that PCV-1 and PCV-2 can infect humans and are not known to cause illness in humans.

Outcome of HSA's meeting with the MOH and ECI

6 HSA has convened a meeting with MOH and ECI on 13 May 2010 to discuss the benefit-risk assessment of the two licensed rotavirus vaccines in Singapore, taking into consideration

the findings of PCV DNA fragments in these vaccines. The meeting agreed on the following aspects:

- No significant safety issues have been observed to date for both rotavirus vaccines, which have been administered to millions of vaccine recipients.
- From current information, PCV-1 and PCV-2 have not been shown to cause infection or illness in humans.
- Rotavirus infection is a common cause of viral-induced gastroenteritis in Singapore and the benefits of these vaccines continue to prevail locally.

7 Based on the above reasons, the MOH and ECI have recommended that both rotavirus vaccines should remain in use locally as the benefits of vaccination continue to outweigh the risk of PCV infectivity.

US FDA's revised recommendations

8 The US FDA has revised its recommendations on 14 May 2010 on the use of rotavirus vaccines and has determined that it is appropriate for health care professionals to resume the use of Rotarix® and to continue the use of RotaTeq®. The agency reached its decision based on the evaluation of information from laboratory results, scientific literature and input from scientific and public health experts, including members of the FDA's Vaccines and Related Biological Products Advisory Committee.

HSA's assessment and recommendations

9 Based on current available scientific and clinical data and the expert opinions of the MOH and ECI, HSA has assessed that the benefits of the rotavirus vaccination currently outweigh the theoretical risk of PCV infectivity. The Vigilance Branch has not received any local adverse event reports associated with rotavirus vaccines which appear to be related to this issue but will continue to monitor the situation closely and update healthcare professionals as appropriate.

10 Healthcare professionals can continue to use Rotarix® in patients who have previously deferred vaccination with this vaccine. Patients who have started or have been switched to the RotaTeq® vaccination schedule may wish to complete their course of vaccination with RotaTeq®. It is recommended that parents should be made aware of the presence of the PCV DNA in these rotavirus vaccines so that they can make an informed decision before their child is vaccinated. It is to be noted that rotavirus vaccination is an optional vaccination that is not included in the local Childhood Immunisation Programme.

11 Please contact Dr Yvonne Koh at Tel: 6866 3550 or email: yvonne_koh@hsa.gov.sg or Ms Sally Soh at Tel: 6304 5448 or email: sally_soh@hsa.gov.sg should you have any queries on the above information.

Yours sincerely

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