VACCINES REVISITED, THE BRAVE NEW WORLD OF PREVENTATIVE VACCINATION

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The value of vaccination has been known since its early days, such as when Dr Edward Jenner, an English general practitioner, performed the first recorded vaccination in 1796 by inoculating cowpox into the arm of 8-year-old James Phipps, and thereafter proved that cowpox vaccination prevented smallpox. Much water has passed under the bridge since then, and there have been many advances made since our last issue on vaccinations in 2005.

Without doubt, the series of childhood vaccinations remain the cornerstone of our vaccination programme in Singapore. The routine vaccination of all children covers tuberculosis, hepatitis B, diphtheria, pertussis, tetanus, poliomyelitis, measles, mumps, rubella and more recently pneumococcus, and has been very effective in reducing the incidence of such infections, reducing to zero for cases of diptheria, polio and neonatal tetanus.[1] Hepatitis B vaccinations have also greatly reduced the incidences of acute Hepatitis B infections, perinatal infections, and the Hepatitis B carrier rate in the general population.[2] Despite good rates of uptake of the MMR vaccine, resurgence in measles infections in 1992, 1993 and 1997 led to the implementation of a 2-dose measles vaccination in 1998. The 2nd booster dose was moved to primary 1 from primary 6 following an measles outbreak in 2004 in primary school children who were infected before their scheduled booster.[3] Thankfully, there is now less resistance to measles vaccination ever since Andrew Wakefield's study was discredited and subsequently withdrawn by the Lancet in February 2010.

Congenital rubella has virtually disappeared from the scene,[4] and mumps cases have stabilized since exclusive use of the Jeryl-Lynn strain. Use of combination vaccines have steadily increased, though high costs remain a barrier.

The recent inclusion of pneumococcal vaccination into the Singapore Childhood Immunization Programme could not have come at a more timely moment. The incidence of invasive pneumococcal disease remains significant, and the rates of antibiotic resistance is increasing, such as penicillin resistance in 44.4% of isolates.[5] The increased uptake of pneumococcal vaccination, especially now that Medisave and baby bonus funds can be used to pay for it, will hopefully in time reduce pneumococcal infections in the population through herd immunity.

Increased interest in seasonal influenza and H1N1 vaccinations have been seen in recent times, and time will tell if these become routine in our medical landscape in Singapore.

The advent of vaccination against human papilloma virus (HPV) is another landmark achievement for us to cheer. The high efficacy and safety reports of the two vaccines compels us to vaccinate and protect our women from HPV infection and therefore cervical cancer.

With ever increasing numbers of people traveling overseas, and with increased awareness of potential health hazards associated with such travel, consultations for travel medicine have been on the increase. The spectre of pandemic influenza, such as with H5N1 and H1N1,[6,7] have led to many seeking influenza vaccinations before travel overseas. Many who venture to more exotic locations are also seeking out advice for preventive vaccination and medication. Unit 6 is an excellent refresher for us all.

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