vaccines will directly challenge our existing concepts of new vaccine use. When 1-2 million children die each year in poor countries, having an effective vaccine that is not available because of cost, is intolerable. Pneumococcal vaccination regimens will need to be modified for developing countries, from the point of view of age, serotype coverage and affordability. One approach is maternal immunisation with a 23-valent unconjugated pneumococcal vaccine, to provide the neonate with passive protection from maternally transmitted antibodies. Another approach is neonatal vaccination with a conjugate vaccine. At present the pneumococcus remains a most significant cause of paediatric mortality in the world; the conjugate vaccine has not yet been extensively tested in children in the developing world, although the existing published data suggest it is protective. 15,16

In Australia, conjugate vaccines are likely to be included in the infant schedule. Combination vaccines may impact on this, as may the need for boosting, either in childhood or adulthood. It is clear that there is an unequivocal need for conjugate pneumococcal vaccine to be delivered to remote communities where there are high attack rates of invasive disease and pneumonia. Indigenous Australians are the one population in the world who will most benefit from this scientific advance, because they have a lot of disease and we can afford the vaccine. Ear disease in indigenous children is more difficult; early colonisation and early onset of disease make it less likely that a vaccine started at 2 months of age will make a big difference. For otitis media, vaccination schedules starting at birth and maternal vaccination may need to be considered.

Conference speakers

Ross Andrews, Claire Caesar, Peter Collignon, Carolien Giele, Lyn Gilbert, Jag Gill, Robert Hall, Jeff Hanna, Geoff Hogg, Vicki Krause, Deborah Lehmann, Dace Madore, Peter McIntyre, Robert Menzies, Avner Misrachi, Kim Mulholland, Linda Selvey, Paul Torzillo, John Turnidge

References

- Ostroff SM. Continuing cheallenge [sic] of pneumococcal disease [editorial]. Lancet 1999;353:1201-2.
- Usen S, Adegbola R, Mulholland K, et al. Epidemiology of invasive pneumococcal disease in the Western Region, The Gambia. Pediatr Infect Dis J 1998;17:23-8.

- 3 Torzillo PJ, Hanna JN, Morey F, Gratten M, Dixon J, Erlich J. Invasive pneumococcal disease in Central Australia. Med J Aust 1995;162:182-6.
- 4 Morris PS. A systematic review of clinical research addressing the prevalence, aetiology, diagnosis, prognosis and therapy of otitis media in Australian Aboriginal children. J Paediatr Child Health 1998;34:487-97.
- Gratten M, Carlisle J, Hanna J, et al. Seroepidemiology of invasive pneumococcal disease in Queensland, 1990 to 1997. Commun Dis Intell 1998;22:265-9.
- 6 Grimwood K, Collignon PJ, Currie BJ, et al. Antibiotic management of pneumococcal infections in an era of increased resistance. J Paediatr Child Health 1997;33:287-95.
- Turnidge JD, Bell JM, Collignon PJ. Rapidly emerging antimicrobial resistances in *Streptococcus pneumoniae* in Australia. Pneumococcal Study Group. *Med J Aust* 1999;170:152-5.
- 8 Felmingham D, Washington J. Trends in the antimicrobial susceptibility of bacterial respiratory tract pathogens—findings of the Alexander Project 1992-1996. J Chemother 1999;11Suppl1:5-21.
- 9 Baquero F. Evolving resistance patterns of Streptococcus pneumoniae: a link with long-acting macrolide consumption? J Chemother 1999;11Suppl1:35-43.
- NHMRC. The Australian Immunisation Handbook. 6th ed. Canberra: AGPS, 1997.
- Gilks CF, French N, Nakiyingi J, et al. Lack of efficacy of 23-valent pneumococcal polysaccharide vaccine in HIV-1 infected adults [abstract]. Pneumococcal Vaccines for the World 1998 Conference, Washington DC, October 12-14, 1998.
- Rennels MB, Edwards KM, Keyserling HL, et al. Safety and immunogenicity of heptavalent pneumococcal vaccine conjugated to CRM197 in United States infants. *Pediatrics* 1998;101:604-11.
- 13. Black S, Shinefield H, Ray P, et al. Efficacy of heptavalent conjugate pneumococcal vaccine (Wyeth Lederle) in 37,000 infants and children: impact on pneumonia, otitis media, and an update on invasive disease—results of the Northern California Kaiser Permanente Efficacy Trial [abstract]. Proc 39th Interscience Conference on Antimicrobial Agents and Chemotherapy, San Francisco, September 1999:379.
- Mulholland K. Magnitude of the problem of childhood pneumonia. Lancet 1999;354:590-92.
- Leach A, Ceesay SJ, Banya WA, Greenwood BM. Pilot trial of a pentavalent pneumococcal polysaccharide/protein conjugate vaccine in Gambian infants. Pediatr Infect Dis J 1996;15:333-9.
- Dagan R, Yagupsky P, Goldbart A, Wasas A, Klugman K. Increasing prevalence of penicillin-resistant pneumococcal infections in children in southern Israel: implications for future immunization policies. *Pediatr Infect Dis J* 1994;13:782-6.

Legionnaires' disease outbreak in Victoria

The Victorian Department of Human Services has confirmed that as of 3 May 2000, the number of cases of Legionnaires' disease from an outbreak associated with the Melbourne Aquarium, has reached 58. Cases range in age from 26 to 89 years, and include two deaths. All except one had been at or near the Aquarium between the dates of April 11 and 21. One case had visited the Aquarium on 25 April. Of the 58 confirmed cases, 57 had visited the Aquarium and the other case had walked close by.

The Department is awaiting test results on a further 35 people who had been to the Aquarium and who have developed respiratory symptoms. These include two patients from New South Wales, four from Tasmania, one from Queensland, two from New Zealand and one from the United Kingdom. The Department established a Legionnaires' disease Hotline on 27 April; the first day that the outbreak was identified. This call centre has taken in excess of 5,000 calls, mainly from members of the public with concerns about the disease. The Hotline number is 1300 365 677.