

Type: Oral Presentation

Final Abstract Number: 21.010
 Session: Bacterial Infections
 Date: Friday, April 4, 2014
 Time: 10:15-12:15
 Room: Room Roof Terrace

A decade of invasive meningococcal disease surveillance in South Africa: 2003-2012

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Background: Meningococcal disease is a devastating illness that is endemic to South Africa, where vaccine use is negligible. Disease incidence typically follows a cyclical pattern. We aim to describe the epidemiology of invasive meningococcal disease (IMD) in South Africa over the past decade.

Methods & Materials: Cases and isolates of IMD were collected through a national laboratory-based surveillance programme, GERMS-SA, from January 2003 through December 2012. Demographic data were collected from all cases and clinical data on outcome and HIV-status were available from 26 sentinel hospital sites only. Viable isolates were serogrouped using slide agglutination to capsular polysaccharides. Incidence rates were calculated using population denominators from STATS-SA.

Results: Of the 4537 IMD cases reported, 63% (2865) had viable isolates available for serogrouping and 35% (1576) had clinical data. Seventy-six percent (3461) of cases were identified from cerebrospinal fluid, 23% (1052) from blood and 1% (24) from other invasive specimen types. The majority of cases were sporadic. The average annual population incidence was 0.9/100 000. Incidence peaked at 1.4/100 000 in 2006 and decreased to 0.5/100 000 in 2012 ($p < 0.001$). Incidence was highest in infants (8/100 000), decreasing with increased age. Where sex was known, IMD was more common in males (55%, 2423/4409).

Serogroups A, B, C, W, Y, X and Z all occur in South Africa. In 2003, serogroup A was predominant (0.2/100 000) but numbers declined steadily and no cases have been reported since 2010. From 2004 to 2012, serogroup W emerged as the predominant serogroup with a peak in incidence in 2006 at 0.7/100 000. Serogroup B disease is

the second most common serogroup and incidence has averaged at 0.13/100 000.

Where patient outcome was known, average case-fatality ratio (CFR) was 17% (269/1565), however 30% (52/175) of patients with bacteraemia died versus 16% (217/1380) with meningitis ($p < 0.001$). HIV-prevalence amongst patients with IMD was 39% (range 25–48%) - 3.4 times the HIV prevalence (11%) amongst the general population between 2003 and 2012 (range 10–12%).

Conclusion: Currently IMD in South Africa is at a nadir which should alert us to the possibility of an increase in disease over the next few years.

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Type: Invited Presentation

Final Abstract Number: 22.001
 Session: Plenary IV: Otitis Media
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 Room: Auditorium 1

Otitis media as an infectious disease: the debate goes on

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Otitis media (OM) has been the subject of prolonged debate with regard to efficacy of treatment and to the extent of the effect of pneumococcal conjugate vaccines (PCVs). Much of it is based on the inability to appropriately diagnose the disease, but even when studies are designed judiciously, results still do not lead to unequivocal conclusions. Presently, several highly quoted studies have clarified some of the issues in regard to response to treatment but the results have generated new questions and debates. Although evidence showed unequivocally that the great majority of OM has bacterial infection components, the benefit (both short and long-term) of antibiotic treatment was questionable, while the association of treatment with adverse events and antibiotic resistance is clear. The effect of PCVs on OM further complicated the picture on the one hand, but led to significant reduction in burden of the other hand. The current understanding of the role of the 2 main pathogens, *S. pneumoniae* and nontypeable *H. influenzae* (NTHi) and their interrelationship in OM make it clear that what is termed by all “OM” is in fact a compilation of several entities, each very distinct bacteriologically and clinically from the other, although part of a continuum. When looking at each entity separately (acute “simple” OM; recurrent/non-responsive/spontaneously draining OM; chronic OM [glue ear] etc.), the explanation of response (or no response) to treatment and prevention are much clearer. The need to study each entity separately is emphasized, together with better defining clinical and research goals.

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