



INTERNATIONAL SOCIETY FOR OTITIS MEDIA

APRIL 2014

Newsletter

#2



Otitis media as a global health issue

Chronic suppurative otitis media is a major global health issue. A decade ago the World Health Organisation estimated that chronic otorrhoea affects 65–330 million people worldwide, the majority of whom will also have significant hearing impairment. Those from economically or socially disadvantaged backgrounds in resource poor settings are particularly at risk, as are some indigenous populations.

In this, our second newsletter, we focus on the global burden of otitis media, with articles describing

the scale of the problem in parts of South America, Africa and India, as well as in the indigenous populations in Australia and the arctic regions. The efforts of our authors to quantify the problem and to instigate local initiatives to combat ear disease is to be commended, but belies the persistent lack of research in this area, and our consequent poor understanding of chronic ear suppuration.

The newsletter is completed by updates from the President, Treasurer and Secretary, detailing how our society

continues to evolve in size, structure and enthusiasm.



Mr Mahmood Bhutta
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Prof Richard M. Rosenfeld
President, ISOM

The ISOM adds new transparency, accountability, and opportunity to a four-decade tradition of otitis media symposia and research meetings. To illustrate this point I will focus on the upcoming International Symposia, scheduled for June 2015 in the Washington DC region.

President's report

The most obvious change might be that we no longer distinguish "ordinary" (US-based) vs. "extraordinary" (outside the US) symposia; every symposium will have the same structure and nomenclature as stated in our bylaws, with an organizing committee, vendor relations committee, and a program committee of up to 12 members, plus ex-officio members including the president, secretary, and chairperson of the immediate preceding symposium (for continuity).

The program committee chair for 2015, Jian-Dong Li, has already selected a diverse group of members, representing the US, Europe, Asia, and South America. In contrast to prior symposia, where the program committee had a strong regional focus, this new structure encourages transparency and promotes opportunity for all. Moreover, all program committee members are first vetted and approved by the ISOM Board of Directors.

Our Board and Executive Committee are very active, meeting by telephone and through frequent email exchanges. The result has been an enhanced website (www.otitismediasociety.org), new edition of the newsletter, establishment of our first ISOM committees, and tight oversight of symposium progress. By the time of OM2015 we will have our full committee structure in place, and would certainly welcome expressions of interest for serving on the numerous committees outlined in our bylaws.

The ISOM will make every future symposium extraordinary by enabling an ongoing, international, multidisciplinary conversation about otitis media, instead of a brief burst of activity every two years. Better yet, ISOM members will enjoy discounted symposium registration fees. I welcome you all to join our conversation and become active in this vibrant, new society.

Otitis media in Australian Aboriginal children



almost universal and persistent within the first 6 months of life.

However, it is not all bad. There have been substantial reductions in CSOM in urban Aboriginal children. In some remote communities, improvement in general social conditions, intensive vaccination programs, greater parent support, clinical practice more consistent with evidence-based guidelines, and a commitment of governments to 'Close the Gap' in hearing health are all having positive effects.

Australia has benefited from high quality studies addressing otitis media in other populations and the commitment of research leaders to global health. In return, Australian researchers, in partnership with Aboriginal communities, have been able to contribute to basic science research into nasopharyngeal and middle ear microbiology and immunity, clinical trials in prevention and treatment, and novel surgical techniques. Indigenous and non-Indigenous researchers and clinicians across the breadth of the country are now working to create a national Centre of Research Excellence in Otitis Media. This exciting new phase of collaboration will prioritise the translation of research into action.

Australian Aboriginal and Torres Strait Islander children have the highest documented rates of severe otitis media in the world. In some remote communities, otitis media (OM) and its complications are chronic conditions that affect up to 73% of children. The more severe disease (chronic suppurative OM, CSOM) is associated with greater hearing loss. This may have a substantially greater educational impact in children trying to learn English as a second language.

The aetiology of OM in Aboriginal children in the most severely affected children is directly related to the social determinants of health. Extreme poverty, overcrowded and inadequate housing, insufficient hygiene practices (often related to lack of running water), and difficulties in the provision of appropriate health care are all important. This has led to a situation where some communities of Aboriginal children have overwhelming bacterial colonisation of their nasopharynx by 12 weeks of age. OM becomes



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Ass Prof Peter Morris
Menzies School of
Health Research



Prof Amanda Leach
Menzies School of
Health Research

A word from the Secretary

It is my pleasure to provide an update from the Secretary's Office as the International Society for Otitis Media continues to develop quickly from its initial idea to a fully formed Society. The Executive Committee and Board have been working diligently on this behalf.

The Secretary's Office is responsible for the scheduling of these meetings and it has been a pleasure to get our colleagues from around the world to discuss the important work of the Society through international conference calls. The challenges of time zones across the globe are real, but it is

my pleasure to report that there has been great engagement in these activities despite some of the callers needing to phone in at times that are well outside what would be convenient! These efforts from these calls have resulted in great forward momentum which has included the development of three committees: Program Committee, Chaired by Jian-Dong Li, for the 2015 ISOM meeting in June of 2015 in Washington DC, the Research Committee Chaired by Lauren Bakaletz and the Membership Committee Chaired by Tania Sih. Further work is ongoing to develop an IT Committee.

Additional substantive work has been completed on the website (<http://www.otitismediasociety.org/>) and I would encourage all to visit the website to see its development. It is also not too soon to reserve the time on your calendar for the 2015 meeting!

The specific web page for this is <http://www.otitismediasociety.org/2015-symposium.html>.

Please do not hesitate to contact me if I can provide any further assistance to you.



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A word from the Treasurer



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I am delighted to inform you that the ISOM charter membership is steadily growing. As of the 1st of March, 2014 we have 70 Active, 6 Student and 6 Honorary charter members. Everyone who joins the ISOM through the 18th International Symposium on Otitis Media Meeting in Arlington, Virginia, June 7-11, 2015 will be designated a charter member status. A Vendor Committee with Kenny Chan, MD, as chair has been developed to secure corporate support for the 2015 meeting.

As we are a very young Society we encourage you to become active in the Society and thereby be part of the future. You can support the Society by serving on committees but also by encouraging membership of your students, trainees and colleagues. Membership information can be found at www.otitismediasociety.org.

Note that to serve on a committee you have to be an active member.

It has come to our attention that it has previously been difficult to pay through PayPal. It should have been remedied. However, if you have any problems, please contact me.

I wish you a wonderful spring after this long and cold winter in the Northern Hemisphere.



Establishing a new Malawian ENT service

Wakisa Mulwafu returned to Malawi, a poor country with 14 million inhabitants, as its only ENT surgeon in 2007. The burden of disease of ENT unknown. He established a new ENT service based at Queen Elizabeth Central Hospital (QECH) in Blantyre with donor funding. It was built onto the existing health delivery model, with careful planning and investment in personnel, infrastructure and training, and establishing outreach clinics. Data collection was introduced to inform the design of the clinical platform and to facilitate evidence based service delivery. A new ENT clinical officer course was established; 15 clinical officers have since been trained. Outreach programmes were introduced to remote areas; a clinical officer and nurse were placed at each outreach hospital.

In 2012, 15,284 patients were treated of which 543 consultations were at outreach clinics; 53% were children. Table 1 summarises the ear pathology in 1,834 patients seen at QECH ENT clinic. Only 16 patients had middle ear surgery. Table 2 presents a summary of the operations done in theatre.

The clinical capacity for ear surgery is very limited. Although clinical officers are trained in basic surgery like tonsillectomies and adenoidectomies, their ability to do ear surgery is limited as it requires skill, supervision and equipment. It is an area that needs to be further explored.

The authors have learned that to establish an accessible, sustainable specialist ENT service in a poor country like Malawi requires

building onto the established health delivery model, careful planning and an investment in personnel, infrastructure and training of mid-level health workers, as well as establishing community outreach clinics. Ear surgery, in particular requires investments in equipment and training. Appropriate data collection is essential to determine the burden of disease and to inform and fine tune the clinical platform.



Dr Wakisa Mulwafu
University of Malawi



Prof Johan Fagan
University of Cape Town

| Operations in Theatre | Children | Adults | Total | % |
|--|------------|------------|------------|------------|
| Tympanoplasty | 1 | 0 | 1 | 0.2 |
| Mastoidectomy | 1 | 4 | 5 | 1.2 |
| Grommets/ Myringotomy | 4 | 6 | 10 | 2.4 |
| Ear polyps/toilet/ examination under anaesthesia | 1 | 5 | 6 | 1.5 |
| Foreign body/ biopsy of ear | 56 | 16 | 72 | 17.5 |
| Incision & drainage of ear | 0 | 1 | 1 | 0.2 |
| Preauricular cyst/sinus | 2 | 6 | 8 | 1.9 |
| Non-otologic cases | 116 | 193 | 309 | 75 |
| Total | 181 | 231 | 412 | 100 |

| | Children | Adults | Total | % |
|----------------------------------|------------|-------------|-------------|------------|
| Acute otitis media | 83 | 84 | 167 | 9 |
| Otitis media with effusion | 260 | 381 | 641 | 35 |
| Dry perforations | 148 | 148 | 296 | 16 |
| Chronic suppurative otitis media | 321 | 409 | 730 | 40 |
| Total | 812 | 1022 | 1834 | 100 |

Table 1: Ear pathology seen at the ENT Unit at QECH in 2012

Table 2: Operations in 2012

Otitis Media in the Arctic



Along with other indigenous populations around the world, the Inuit living in the Arctic suffer from frequent episodes of otitis media (OM). Often the disease starts in very early childhood and proceeds to chronic suppurative stages (CSOM), causing lifelong hearing impairment and sometimes severe intracranial complications.

We have performed several population field investigations in Greenland documenting the problem. Thus children between 0-2 years of age in Greenland spend on average 40% of their time with symptoms of upper respiratory tract infections (URTI), between 7-14% suffer chronic OM with perforation, and the cumulative incidence of CSOM at 4 and 14 years of age are 14% and 19% respectively. Approximately

50% of children in Greenland suffer from hearing loss >25 dB in the worse hearing ear and approximately 10% of youth suffer from a hearing loss >40 dB in one or both ears. A child with CSOM will in $>90\%$ of cases end up with a permanent hearing loss.

Risk factors for CSOM are URTI, early first episode of OM, overcrowding, passive smoking, use of daycare, having parents with a history of CSOM, and having parents with low educational level. Recently we documented in a cohort follow-up study that the spontaneous healing rate after CSOM is between 39-75% (depending on the definition of CSOM). The microbes involved do not differ from that in other populations but early and massive colonization, and carriage of potential pathogens is frequent.

We have introduced an algorithm for diagnosis and treatment of OM in Greenland and have proposed a structured programme of care to be carried out in the local healthcare setting. We recognise that we must incorporate the consequences of hearing loss in children and youth as one of our outcomes.



Prof Preben Homøe
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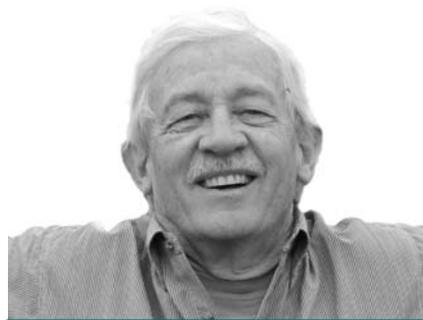
Otitis Media in young children in South America: a perspective from São Paulo and Buenos Aires

Otitis media, in its common forms of acute otitis media and otitis media with effusion is probably similar in large urban populations anywhere. Children grow up ever more exposed to crowding in playschools from a very early age and the high prevalence of these diseases, in spite of breast feeding promotion and extended primary prevention through immunization, would seem to be largely unaffected. Field studies, even in high risk populations, are generally lacking in South America. Diagnostic accuracy, often difficult, is hampered by the lack of appropriate tools that reduce uncertainty. They are costly for primary care physicians and rarely encouraged for use during pre or post graduate training. Published guidelines, in their many translations and interpretations, are seldom heeded

in everyday practice. Pneumatic otoscopy is scarcely used and many of the additional diagnostic aids like acoustic reflectometry or tympanometry are only available in hospitals or special clinics.

Nevertheless community clinicians, particularly pediatricians, are increasingly aware of these diagnostic shortcomings and gradually adopt the observation option policy for selected families that are urged to accept this new way of management for AOM. This is definitely a growing trend in our cities and it is sometimes enhanced with written statements for parents in brochures that contain information and checklists of clinical observations that facilitate feedback with the physician and shared decision making. This seems a very positive out-

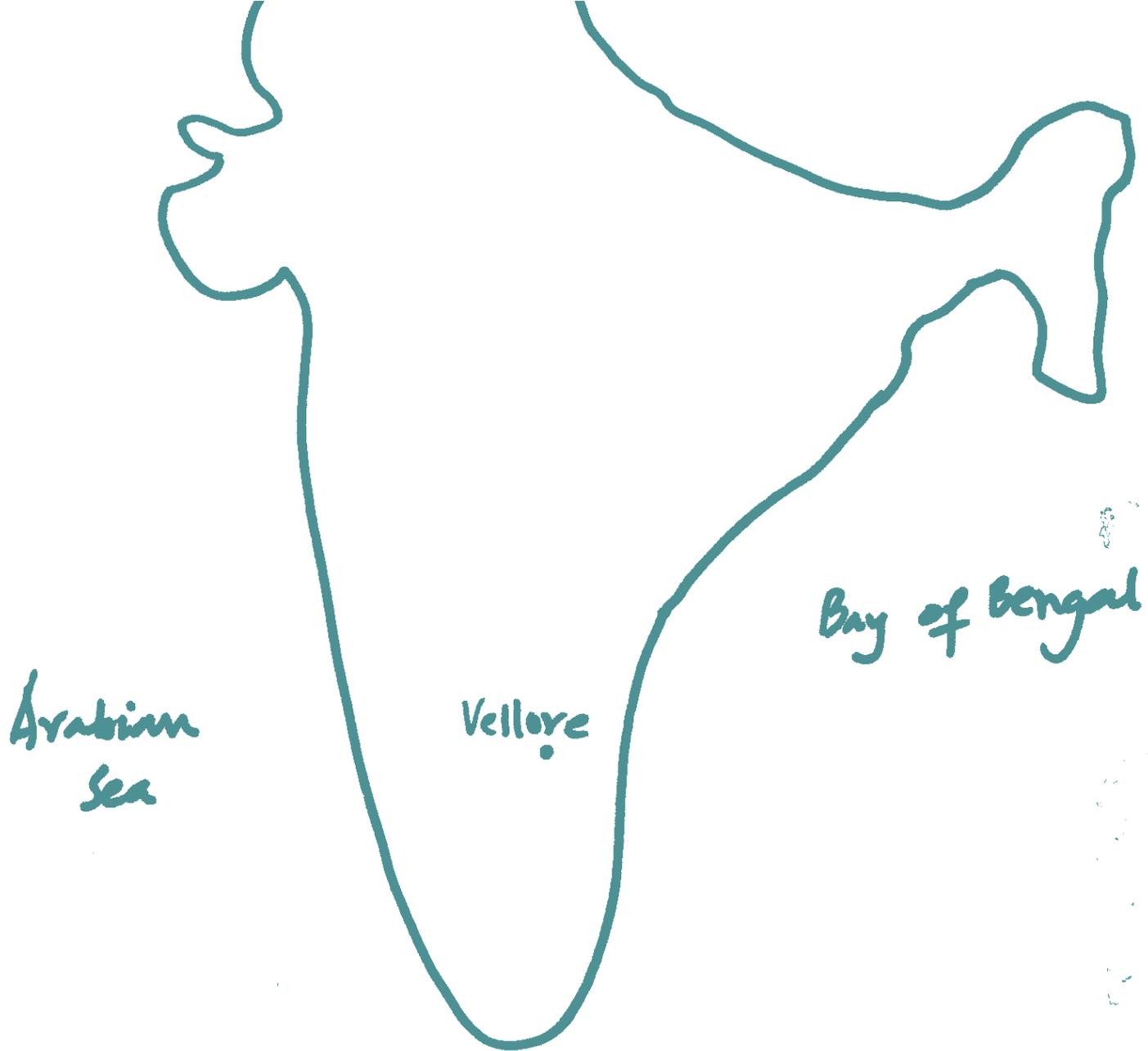
come of the paradigm shift in management of AOM that has developed in recent decades. Finding, monitoring and treating CSOM in young children is fraught with even greater difficulties that seem similar everywhere and furthering a better overall handling of this complex disease will surely be one of our major challenges at ISOM.



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Prof Tania Sih
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Prevalence and treatment of otitis media in Indian children: perspective from Vellore

The prevalence of otitis media in Indian children is one of the highest in the world, ranging from 8.6% to 20% (Table 1). This, despite a significant reduction in the prevalence of the disease in certain states of the country over the past two decades. Our epidemiological studies at Vellore, Tamil Nadu (Fig. 1), have shown that the overall prevalence of otitis media has fallen from 17.6% in 1997 to 8.6% in 2010. This trend has

closely followed improvements in health and economic status of the people of that region. However, in many parts of India, prevalence remains high.

The risk factors for otitis media in children have not been studied extensively and a few reports from India have highlighted the common risk factors for that region. Studies from our institution have shown that persistent rhinorrhoea

is the prime risk factor for the disease. Studies from other parts of India have found that factors like crowding, lower socioeconomic status and smoking are important risk factors too.

Our epidemiological studies have shown that otitis media with effusion is the most frequent manifestation of the disease among children. Depending on the type and stage of disease, age of the

Prevalence of various manifestations of otitis media in India

| Reference | Age group | Setting | Prevalence |
|---|-----------|------------------|--------------------------|
| Chronic otitis media | | | |
| Jacob et al. IJPOL 1997;39:133 | 5-10 yr | Vellore | 7.8% rural |
| Rupa et al. IJPOL 1999;48:217 | 2-6 yr | Vellore | 6% rural |
| Bandyopadhyay, et al J Ind Med Assoc 2005;103:430 | 5-10yr | Hooghly, Kolkata | 12.5% urban 20% rural |
| Verma et al. Ind J Pediatr 1995;62:725 | 5-12 yr | Haryana | 15.3% rural |
| Sophia et al. IJPOL 2010;74:677 | 1-6 yr | Vellore | 1.4% rural |
| Chadha et al J Laryngol Otol 2013;127:28 | 5-12 yr | New Delhi | 3.06% urban |
| Otitis media with effusion | | | |
| Jacob et al. IJPOL 1997;39:133 | 5-10 yr | Vellore | 9.9% rural |
| Sophia et al/ 20105 | 1-6 yr | Vellore | 6% rural |
| Siddharta et al/20127 | 5-10 yr | Karnataka | 4.5% rural |

patient and presence of complications, either medical and/or surgical management may be offered. Spontaneous closure of perforations could be expected in small dry perforations. In children with mucosal disease and discharging ears, dry mopping or suction clearance followed by administration of topical ciprofloxacin ear drops is preferred. In children with dry perforations, myringoplasty is done with the aim of preventing infection. In those with squamosal disease, early surgery in the form of modified radical mastoidectomy is advised. Canal wall down mastoidectomy is preferred to canal wall up mastoidectomy in children because of the smaller size of the mastoid with resultant small and easily manageable cavity. Further, followup is often

poor and a single definitive procedure is more cost-effective for most children.

Otitis media has a major impact on Indian children both in terms of the sequelae like hearing loss and the complications that result. The National Rural Health Mission reported in 2006 that the disease was the commonest cause of hearing loss in Indian children. Similar findings were noted in our epidemiological studies.

There is enormous scope for further research in the subject but one of the prime limitations is lack of funding and political will to address these health issues at a national level. Some important data still not widely available is the incidence of acute suppurative otitis media in Indian children, the

epidemiology of nasopharyngeal colonization in the early years of life and the role of pneumococcal vaccination in reducing burden of disease in Indian children.



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Save the dates!



INTERNATIONAL SOCIETY FOR OTITIS MEDIA

18TH INTERNATIONAL SYMPOSIUM ON RECENT ADVANCES IN OTITIS MEDIA

SAVE THE DATE ★ June 6 – 10, 2015 ★ www.OtitisMediaSociety.org

Arlington, Virginia
Gateway to the Nation's Capital – The best place to stay, shop, dine and play when visiting Washington, D.C.



19TH INTERNATIONAL SYMPOSIUM ON RECENT ADVANCES IN OTITIS MEDIA

SAVE THE DATE ★ JUNE 4 - 8, 2017 ★
Gold Coast Queensland, Australia

www.OtitisMediaSociety.org

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