Publications from the Canadian Paediatric Society (CPS) Committee on Infectious Diseases and Immunization aim to provide practical advice for family physicians and pediatricians regarding the prevention and management of infectious diseases. Position statements represent CPS policies and contain recommendations, while practice points are primarily educational. The present article will summarize recent publications, all of which can be accessed online at www.cps.ca/documents/authors-auteurs/infectious-diseases-and-immunization-committee.

**Prevention and management of neonatal herpes simplex virus infections (1)**

Prevention of neonatal herpes simplex virus (HSV) remains a vital goal because the clinical presentation is nonspecific and, thus, therapy is commonly delayed, leading to mortality and long-term morbidity. It remains standard practice in Canada to perform a caesarean section (CS) for women with visible genital HSV lesions at the time of delivery to prevent neonatal HSV infection. This is a controversial policy for women with recurrent genital HSV because it is estimated that 1580 CSs must be performed to prevent one case of neonatal HSV (2). Women with a history of genital HSV are commonly prescribed antivirals from 36 weeks’ gestation until delivery. This decreases the need for CS but does not completely prevent neonatal HSV infection (3).

The major limitation to these strategies is that the vast majority of genital HSV manifests as subclinical shedding. Therefore, most women with genital HSV are not diagnosed and, therefore, are not offered antivirals or a CS. Approximately 10% of asymptomatic and 20% of symptomatic adults seropositive for HSV-2 exhibit genital shedding of virus on a given day, as detected by polymerase chain reaction (PCR) (4). A significant percentage of pregnant women in Canada have antibodies to HSV-2 (10% in an Ontario study from 2000 to 2001 [5] and 17% in a British Columbia study from 1999 [6]). Genital HSV-1 also contributes to neonatal HSV; the Canadian Paediatric Surveillance Program found that 63% of neonatal HSV in 2000 to 2003 was due to HSV-1 (7). More than one-half of genital HSV in British Columbia is now due to HSV-1 (8). It can be concluded that a significant proportion of Canadian infants are at risk for neonatal HSV due to exposure to HSV-1 or HSV-2 during the birth process.

Because neonatal HSV can result in severe developmental delay or death, an analysis showed that it may be cost effective in Canada to screen couples for HSV type-specific discordance to recognize the risk for, and potentially prevent, first-episode genital HSV during pregnancy (9). This analysis assumes monogamy and compliance with treatment with vancomycin and either cefotaxime or ceftriaxone is recommended for previously well children. The statement recommends use of type-specific serology when there is discordance. There is a need for more data regarding the sensitivity and specificity of PCR testing on mucous membrane specimens from potentially exposed infants who remain asymptomatic and on blood from infants with possible disseminated neonatal HSV.

**Guidelines for the management of suspected and confirmed bacterial meningitis in Canadian children older than one month of age (13)**

A common situation in pediatrics is that residents make it into their second year without having seen a case of proven bacterial meningitis. Routine infant immunization programs for pneumococcus and *Haemophilus influenzae* b (Hib) have resulted in this remarkable progress. The incidence of meningococcal meningitis can vary widely from year to year; however, there has been minimal serogroup C disease in Canada in any age group since all jurisdictions introduced routine programs, with some starting at two months of age and others at 12 months of age. The United States has witnessed a similar decrease in the incidence of serogroup C disease in all age groups with only an adolescent immunization program.

Other than continuing remarkable decreases in the incidence of bacterial meningitis, not much has changed between the 2007 and the 2014 CPS position statements on bacterial meningitis. Empirical treatment with vancomycin and either cefotaxime or ceftriaxone is recommended for previously well children. The statement recommends that vancomycin can sometimes be stopped in the face of negative cultures even if they were obtained after antibiotics were given, especially if the local incidence of pneumococcal resistant to third-generation cephalosporins is very low. Given the unclear evidence on
use of corticosteroids for children with non-Hib bacterial meningitis, the statement is noncommittal.

**Clostridium difficile in pediatric populations** (14)

Although the incidence of Clostridium difficile infection appears to have increased in some centres, it is not clear whether this is a true increase or the result of increased testing or more sensitive tests. In a 2003 to 2012 retrospective study involving children hospitalized at the Hospital for Sick Children in Toronto (Ontario), there was no increased incidence over the four years of the study. Only five of 299 cases led to intensive care unit admission. There were no colectomies and the only death was a child who also had Enterobacter sepsis (15). Clearly, children tolerate C difficile colitis better than adults.

The 2002 CPS position statement on C difficile was updated in 2014 (14). The main points are that mild disease is often self-resolving and that retesting should never be performed if the child is clinically improved. Metronidazole remains the treatment of choice for all but severe illness.

**Immunization for meningococcal serogroup B: What does the practitioner need to know?** (16)

There were a mean of 194 cases of invasive meningococcal disease per year in Canada from 2007 to 2011. A mean of 111 of these were serogroup B, of which 22 were in infants <6 months of age and 21 were in children one through four years of age (17). The four-component vaccine 4CMen B or Bexsero (Novartis Pharmaceuticals Canada, Inc) contains the subcapsular proteins neisserial heparin-finding antigen, factor H-binding protein, neisserial adhesion A and Por A. This vaccine was licensed in Canada in December 2013 for children two months through 17 years of age and became available in 2014 (14). The main points are that mild disease is often self-resolving and that retesting should never be performed if the child is clinically improved. Metronidazole remains the treatment of choice for all but severe illness.

REFERENCES


17. NACI statement on meningococcal B vaccine which is not yet on-line but hopefully will be by the time this article comes out


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