Hong Kong Journal of Paediatrics

香港兒科醫學雜誌 (New Series)
An Official Publication of
Hong Kong College of Paediatricians &
Hong Kong Paediatric Society
c/o Hong Kong College of Paediatricians, Room 801,
Hong Kong Academy of Medicine Jockey Club Building,
99 Wong Chuk Hang Road, Aberdeen,Hong Kong.

Publisher
Hong Kong Journal of Paediatrics is published by Medcom Ltd, Flat E8, 10/F, Ka Ming Court, 688-690 Castle Peak Road, Kowloon, Hong Kong SAR. Tel: (852) 2578 3833, Fax: (852) 2578 3929, Email: mcl@medcom.com.hk

Indexed in EMBASE/Excerpta Medica, Science Citation Index Expanded (SCIE) and Scopus

Website: www.hkjpaed.org

ISSN 1013-9923

Editorial

A Crossroad between Paediatricians and Paediatric Surgeons

Prompt recognition and treatment of infectious diseases are the cornerstone of daily clinical paediatric practice, and effective vaccinations are available to prevent many of such microbes such as poliomyelitis, varicella-zoster virus, rotavirus, *Corynebacterium diphtheriae* and *Streptococcus pneumoniae*. The availability of immunoprophylaxis against hepatitis B virus and human papillomavirus can also substantially reduce the healthcare burden of highly prevalent cancers. Nonetheless, the success of this preventive strategy in the public health setting depends not only on efficacy and safety of the vaccines but also their availability, acceptability and uptake as well as the epidemiology and herd immunity of respective vaccine-preventable diseases in a defined population.[1]

Measles is a prototype of vaccine-preventable disease where different places develop different immunisation programmes in light of their epidemiological profiles. Whereas Hong Kong children are vaccinated against measles at 12 months and at primary one, the schedule of measles immunisation in the Mainland consists of two doses at 8 months and 18 months respectively. The two-dose vaccination coverage in Hong Kong has consistently been maintained at over 95 per cent since 2008, which effectively eliminated measles from our region as verified by the Western Pacific of the World Health Organization in September 2016 (https://www.info.gov.hk/gia/general/201609/21/P2016091900657.htm). On the other hand, measles remains a leading vaccine-preventable cause of child mortality in China. According to the Chinese Health Statistics Yearbook, the incidence of measles was 0.46/100,000 Chinese citizens in 2013. A recent report of a measles outbreak in China estimated the measles-containing vaccine coverage to be 90% or lower.[2] In the first original article of this issue, Wu et al reported a case series of 220 infants with measles from the prefecture-level city of Jinhua in central Zhejiang province in eastern China.[3] These cases were diagnosed serologically by anti-measles IgM between January 2008 and August 2015. Four-fifths of these cases were younger than eight months, and complications were more common in this younger than the older group. Complications were more prevalent in this patient group than among older infants. Sadly, seven patients had residual complications, two patients whose parents gave up treatment and one infant died. This study highlighted the need for good coverage for measles in the national immunisation programme, as well as the possible benefit of re-vaccination of women of childbearing age against measles.

In contrast to measles, *Helicobacter pylori* is a common worldwide infection that is an important cause for both peptic ulcer disease and gastric cancer. Children with *H. pylori* infection may also present with recurrent or chronic abdominal pain. A number of recent systematic reviews and meta-analyses indicated that the lowest prevalence rates of *H. pylori* infection were found in Oceania (24.4%) and the highest in Africa (79.1%). Studies in Europe suggested a declining trend.[4,5] The recurrence rates were found to be directly related to the human development index and prevalence of infection. Thus, the disease burden of *H. pylori* remains substantial in many parts of the world. In this issue, Sham provided a literature update about the therapeutic strategy for this infection in children based on the recommendations from two major international guidelines.[6] The materials were initiated as an Update on Clinical Practice document under the Hong Kong College of Paediatricians, which was reviewed and endorsed by the Hong Kong Society of Paediatric Gastroenterology, Hepatology and Nutrition. Both paediatricians and paediatric surgeons will find the updated diagnostic and prescribing information for *H. pylori* infection in this article useful in their daily practice on children with relevant gastrointestinal diseases.

The widespread use of endoscopy has advanced the care of paediatric surgical patients. In fact, paediatric surgeons were among the pioneers of laparoscopic surgery in the early 1970s.[7] However, interest in laparoscopic surgery in children remained confined to a few enthusiasts until the recent availability of miniaturised instrumentation. More recent survey in USA suggested that 82% of paediatric surgeons perform laparoscopic surgery.[8] In this issue, Ates et al evaluated the reasons for conversion to open surgery in 2068 laparoscopic cases in Turkish children between 2003-2015.[9] They reported that 1848 (97.9%) of the 1887 cases intended to be performed by laparoscopy were successfully completed. High conversion rates to open surgeries were found for Nissen fundoplication and splenectomy. Whereas the success of laparoscopic surgery depends

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The editors like to acknowledge with gratitude the major contributions of the reviewers who have rendered their valuable service in reviewing the articles submitted to our Journal in 2018.

heavily on the expertise, the authors highlighted the importance of pre-operative examinations before laparoscopic procedures to reduce the conversion rates. This issue also published a case report of epiploic appendagitis in an obese 15-year-old boy with chronic abdominal pain.[10] Obesity and heavy exercise are recognised risk factors for this condition. High index of suspicion followed by careful investigative workup can prevent any unnecessary surgical intervention on these cases.

Congenital hypothyroidism is an important preventable cause of mental retardation. Its incidence was reported to be 1 in 2404 in Hong Kong.[11] Sufficient doses of thyroxine should be started within a few weeks after birth to prevent irreversible brain damage. An under-explored area in congenital hypothyroidism relates to its deleterious effects on cerebral renin-angiotensin system, which plays important roles in blood pressure control, sodium intake, drinking behaviour and cognitive performance.[12] In this issue, Wu and colleagues investigated the impact of methimazole-induced hypothyroidism on the expressions of angiotensin II type 1 receptor-a (AT1a) and type 2 receptors in the mouse brain.[13] In this animal model of developmentally-induced hypothyroidism, the cerebral AT1a mRNA expression was significantly decreased during postnatal development. Such observation supported the pivotal roles of thyroxine on the development of cardiovascular and neurocognitive diseases in early life.

Genetic diseases have been a recurring theme in this Journal, and three such case reports were published in this issue. The first of these articles described Legius syndrome, first reported in 2007, in a child with multiple café au lait spots who was initially suspected to suffer from neurofibromatosis type 1.[14] The authors discussed clinical features that differentiated these two similar conditions and their impact on genetic counselling. Hashimoto et al reported the rare occurrence of a surviving triploid infant who suffered from severe fetal growth restriction and multiple malformations.[15] They suggested syndactyly of the third and fourth fingers and abnormal erythrocyte indices to be relatively unique clinical features of triploidy. Such infants with long-term survival appear to be at risk of pneumonia and infantile spasms. The last case report described a neonate with congenital myotonic dystrophy 1 who was born to an asymptomatic mother after *in vitro* fertilisation.[16] Genetic analysis confirmed maternal transmission of the expanded CTG repeats, which accounted for earlier age of onset and increasing disease severity in her offspring. These three articles highlight different challenges in the diagnosis, management and counselling of genetic diseases in the clinical practice.

TF Leung
Associate Editor

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