

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.

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Hong Kong Journal of Paediatrics is published by Medcom Ltd, Room 504-5, Cheung Tat Centre, 18 Cheung Lee Street, Chai Wan, Hong Kong. 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.hkjpae.org

ISSN 1013-9923

Editorial

Revisit the Conventional Diagnostic and Therapeutic Approaches

The progress of Western Medicine has evolved from clinical observation to different laboratory investigations since old dates. There are some clinical practice, laboratory parameters and therapeutic interventions that have been considered as reliable in managing specific disease processes. However, through continuous studies and discovery of new modalities, some old practices have to be revised or even replaced by newer modalities. In this issue, several articles tried to revisit some of the traditional approaches in diagnosis or treatment and examined their validity.

Rickets due to Vit-D deficiency has not been encountered for quite a long time in Hong Kong. In the prospective cohort study conducted by Yu LJ, et al, it showed that Vit-D deficiency is actually quite common among children in the Northern China even they don't have the clinical features of rickets. The high prevalence may be related to the prolonged home bound and heavy clothing of the children especially during the winter time. Low calcium, low phosphate and elevated alkaline phosphatase have been considered supportive evidence of Vit-D deficiency. It has long been known that the serum level of alkaline phosphatase is higher in children and this is related to their rapid growth rather than impairment in bone or liver function. On the other hand, the calcium and phosphate levels are not sensitive enough as a warning sign for non-symptomatic patients. Actually, the prevalence of subclinical Vit-D deficiency among Children in Hong Kong has also been shown to be quite high. It was around 26.6% in normal children but can be as high as 48% for children with atopic eczema.¹ The calcium, phosphate and alkaline phosphatase levels are not reliable parameters to rule out subclinical Vit-D deficiency.

The diagnosis of Hirschsprung disease can be difficult especially for those with a short segment defect. Contrast enema has been advocated as a screening tool for patients with suspected Hirschsprung disease. In the retrospective single centre cohort review performed by Tang PMY, et al, it showed that the contrast enema is not a very reliable diagnostic mean for Hirschsprung disease. It has a high discordant rate among radiologists (56%) and high false positive and negative rate (mean sensitivity 49.6% and mean specificity 81.2%). Therefore, it has to be interpreted with caution and should never be used as final verdict. The histological diagnosis by experienced pathologists remains the gold standard in the diagnosis of Hirschsprung disease.

In another retrospective single centre cohort review performed by Gürbüz B, et al, the aetiology, clinical features and treatment outcome of children with status epilepticus were reviewed. It suggested that many of the patients with prior history

of epilepsy might have poor compliance and were prone to mismanagement during their initial care in non-specialised clinic or hospital. In fact, there are significant changes in the classification and management of status epilepticus in recent year.² In a recent meta-analysis review of status epilepticus management,³ intravenous lorazepam and intravenous diazepam are equivalent in controlling children with status epilepticus (Level A evidence). While rectal diazepam, non-intravenous midazolam (intramuscular, intranasal, and buccal) are probably as effective but may not be having similar strength of evidence to support (Level B evidence). There is no significant difference in the efficacy between intravenous lorazepam and intravenous diazepam in adults or children with convulsive status epilepticus (Level A evidence). The most commonly encountered adverse events are respiratory or cardiac dysfunctions (Level A evidence), but interestingly, the rate of respiratory depression caused by benzodiazepines is lower than those of placebo. This suggests that respiratory suppression is an important consequence of untreated convulsive status epilepticus rather than anticonvulsive treatment (Level A evidence). For second line therapy, fosphenytoin is better tolerated than phenytoin but phenytoin is as effective in treating adult patients with status epilepticus (Level A evidence). For children, current second line therapy appears less effective in general and there are no data about third line therapy efficacy (Level C evidence). Further study is needed to answer this question, but due to the emergent nature and rarity of this condition, it will be hard to conduct such a study in any single centre.

Endobronchial intubation and positive pressure ventilation has been replaced by CPAP in recent years for weaning premature baby from ventilator support. There are different ways in delivering CPAP and which one is the best approach remains controversial. In the meta-analysis performed by Wang TF et al., it showed that bubble CPAP is just as effective as other forms of CPAP. However, if we analysed the outcome categories, bubble CPAP could reduce the failure rate of CPAP and also shorten the hospital stay. However, it also led to higher risk of nasal trauma. Of interest, out of the

196 studies identified, eventually only 7 fulfilled the pre-set criteria and were analysed. The "Jadad" score which provided some insight of the quality of the selected studies were also provided. Jaded score mainly looks at 3 parameters including: 1) Was the study randomised? 2) Was the study double-blinded? 3) Was there a description of withdrawals and dropouts? Though these criteria are criticised as over-simplified and put too much emphasis on blinding, it remains one of the most widely adopted methods used. This highlighted that high quality papers are in fact not easy to find and good measurement to facilitate selection of articles remains to be developed.

How can we keeping up with the vast amount of changes in medical practice? In order to update our knowledge on the current trends of professional development, continued education is mandatory. In this issue, the new learning and knowledge exchange platform shared by the ASPID group (Lee PPW, et al) can serve as a model. In adult education, active participation and instant feedback are both important elements of success. Our journal will also serve as one of the media to assist our reader to keep up with the recent development in paediatric practice.

GCF Chan
Chief Editor

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