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Editorial

Improving Neonatal and Child Health: Even Simple Measures Can Make a Difference

The original articles in this issue high-light some of the recurrent controversy in neonatology. All of them can be handled by simple measures. And if managed properly, they can make a significant impact on the future development of children. One of the traditional practices for preterm baby with patent ductus arteriosus (PDA) is to use prophylactic indomethacin. For patient with clinical evidence of heart failure, it has been accepted that it is of benefit. But for asymptomatic neonates with PDA, whether prophylactic use of indomethacin will make a difference remains controversial. Previous clinical trials failed to demonstrate any long term impact of this approach.¹ Chang's paper in this issue of Hong Kong Journal of Paediatrics further supports this view. One can argue that the timing of treatment may be important (starting at 6 to 24 hours in this study) and the proposed critical period may actually be within the first hour after birth based on some data from animal studies. The lack of long term effect in this study may be due to some intrinsic limitations such as small sample size and lack of randomised prospective control. However, one can speculate that the frequency of intraventricular haemorrhage appeared to be almost double in the group without indomethacin prophylaxis even it did not reach statistical significance, probably due to the small sample size. As suggested by the authors, more well design collaborative studies will be helpful to answer this conundrum.

The article by Lou et al demonstrated the importance of pre-natal iron deficiency in the developing brain, paying particular attention to the auditory function. In fact, in a recent animal study,² maternal iron deprivation would lead to region-specific impairments in the brain of offspring. It alters the underlying structure and function of a wide area of the brain including corpus callosum, hippocampus and cerebral cortex. The alarming fact as shown by this article is that if there is gestational iron deficiency, there will be long term consequence on the auditory function. Therefore, the maternal iron status should be carefully monitored with appropriate supplement provided if needed.

Article by Karaci et al reminded us the potential danger of intracranial haemorrhage due to Vit K deficiency in baby on strict breast feeding. Many of this complication can be avoided if Vit K supplement is given at birth. On the other hand, whether additional dose of Vit K should be given to prevent late onset Vit K deficiency remains unanswered. Other known nutritional deficiencies in children on strict breast feeding include iron, Vit A and Vit D deficiency. Health care providers should pay attention to these potential deficient states and advise the mothers accordingly. These deficiencies should not discourage

us from advocating breast feeding because it remains to be the best nutrient for infants. As long as we stay alert to several unique problems associated with strict breast feeding and provide timely supplement, these deficient states can be avoided.

Another major focus of this issue is related to the contents of the "*Summit on Child Health and the Environment*" organised by the Hong Kong Paediatric Foundation and The Hong Kong Paediatric Society on October 11-13, 2014. Prof. Ruth A. Etzel, Chair of the International Pediatric Association (IPA) Environmental Health Technical Advisory Group, provided up to date evidences on the environmental hazards that children are exposed to currently. Based on the World Health Organization (WHO) estimation, around one third of the disease burden in developing countries nowadays can be attributed to modifiable environmental factors, including indoor and outdoor air pollution, unsafe water, inadequate sanitation, and hygiene. This untoward condition is 2 to 3 times higher than that of most developed countries. If we look at these "modifiable" factors, they can all be reduced by implementation of simple preventive measures. Many of the preventive measures are simple and readily achievable such as changing our habits in disposing garbage including proper classification and recycling, improving personal hygiene, etc.. But how to educate the public in changing their daily practice requires a concerted effort from paediatricians, educators, scientists, government officials and politicians.

In addition, Dr. Chan CW and Dr. Lilian Wong summarised the key messages from many international and local experts given at the Summit. This serves as an archive that our readers can make reference to. It will be important for any possible follow-up action in the future as well. The key messages are: 1) The invisible impacts of Environment are becoming more visible now; 2) Children are more

vulnerable to environmental hazards; 3) The current environment in Hong Kong is unfavourable for our children's healthy growth and development; 4) It is time to take action before it is too late; 5) All stakeholders should work together to create a healthy environment for children and the community as a whole to live.

As shown in this issue of our Journal, simple measures such as the appropriate use of NSAID, iron or Vit-K can make a significant impact on the health status of our children's population. On the other hand, many of our colleagues in different organisations and in different capacities are working hard in formulating strategy to improve the environment which has immense effect on paediatric and child health condition. The strategy does not require sophisticated and expensive equipment to implement. However, it involves policy changes and even adopting simple measures in a population have to gain consensus among different professionals and politicians which becomes a challenging and complicated issue. But such obstacles can be overcome if we stay united and aim at the same goals. I believe if we can start to change some of our wasteful and environmental unfriendly daily practice, we can already make a difference.

**GCF Chan
Chief Editor**

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