From BPD to Wilm's: How Far Have We Travelled in the Progress of Paediatrics?

This year, we have Prof. Hugh O'Bordovich from Stanford to deliver the annual Elaine Field Lecture for us. He talked about the evolution of the management of bronchopulmonary dysplasia (BPD) in newborn. The lecture guided us to sail through the history of this classical complication in newborn period, especially for those premies. We witness the wonderful progress of science and clinical medicine in this disease process. It started from the period when only primitive resuscitation measures were available, high morbidity or mortality was expected outcome. Then, with advance in science, many premies could then be rescued with aggressive approaches such as using prolonged high concentration of oxygen supplement and high pressure assisted ventilatory support, the classical BPD as a complication then surfaced. With the discovery of surfactant and awareness of oxygen toxicity, we finally returned to less aggressive, less traumatic approach. However, in the post-surfactant era, a new form of BPD emerged, especially in the extreme premies. In contrary to the old form, “new BPD” does not affect the bronchial development but lung acinar hypoplasia problem remains. Therefore, Prof. O’Bordovich suggested that it should be named pulmonary dysplasia instead.

To me, who have been focusing mostly on my own sub-specialty area for years, this is really a good refreshment course. In this issue, an article on extreme premies also described their approach of using less aggressive oxygen and ventilatory support which is in line with the current thought. In the latest recommendation for neonatal resuscitation, room air was advocated as the first choice during early resuscitation instead of 100% oxygen. Even the swinging pendulum is moving from one side to the other, one can still perceive the tremendous progress in the management of newborn baby.

Similar new development is evolving in other subspecialty as well. For example, in paediatric haematology and oncology, Wilm’s tumour is one of the prototypes. The advantage of combining surgery with chemotherapy has been firmly established for Wilm’s tumour since the 80’s, the long term survival rate with such approach already go above 90% in most developed centres. However, in recent years, the role of chemotherapy in patients with completely excised stage I Wilm’s tumour has been challenged and revisited. Though with around 10 to 20% higher relapse rate by surgery alone, most of these relapsed cases can be salvaged then by second surgery and chemotherapy. On the other hand, those who advocated chemotherapy upfront are focusing on reducing the duration and intensity of chemotherapy for this group of patients. The debate now is how one will perceive the 10 to 20% differences in the initial relapse rate. Another interesting development, as the article on Wilm’s tumour in this issue pointed out, is the risk of rupture during initial surgery. If a Wilm’s tumour is inadvertently
ruptured during resection, it is an oncological nightmare. Because by then, one has to convert a low stage Wilm's tumour into a higher stage one. The price to pay is that the child will then require additional whole abdominal irradiation! That's why even biopsy is no longer recommended for Wilm's tumour because it will contaminate the abdominal field. The current recommended approach is either completely excise the tumour or treat a renal tumour as Wilm's tumour even without histological proof initially, then proceed to second look surgery later on. This approach remains controversial especially among Chinese children, since Wilm's tumour is relatively less common and a significant proportion of renal tumours are not Wilm's. Currently, a centre in China is studying prospectively whether omitting abdominal irradiation from those who underwent biopsy is safe. The result may help us to answer this paradox. Again, facing the rapid progress in paediatrics, one cannot be too dogmatic in keeping "conventional" or "standard" approaches.

For neurology, many previously poorly defined disease entities have now been redefined and classified. For example, paroxysmal non-epileptic movements in childhood have often been mistaken as epilepsy and in some centres, up to 20% of the referral to the epileptic clinic are in fact non-epileptic in nature such as paroxysmal non-epileptic movements. Proper clinical diagnosis will definitely help to provide appropriate management and counseling. In recent years, with the help of various electronic means including YouTube, the video of many confusing movement disorders can now be found and browsed. This greatly enhanced the teaching and learning of various types of movement disorders and seizures. There are also new electronic journals which provide video record of specific clinical and laboratory procedures nowadays. The resources of information are now just on everyone's fingertips.

Facing with all these rapid development in various paediatric subspecialty fields, no one can really master thoroughly all aspects of paediatrics any longer. For most of the practicing paediatricians, the bread and butter are general paediatric problems but they often have to handle all sorts of paediatric diseases in their early or initial phase. Therefore, they have to be familiar with the mounting amount of information related to the latest advances in paediatrics. Continued education and assessment is necessary to uphold the standard of clinical practice and safeguard the welfare of the sick children. Our own paediatric journal is one of the vehicles that can provide a learning platform for continuous educational purposes. In USA, after a fixed period, paediatricians have to re-take the certified board examination to make sure that they have been keeping themselves updated. Such approach may be considered as too drastic by some local paediatricians but we have to monitor the outcome of our self-learning format and some innovative re-assessment method may be needed to maintain our professional standard in the future.

The rapid development in various paediatric subspecialties also leads us to the issue of accreditation. As pointed out, most paediatricians engage in general paediatrics may not have enough times to keep up with all aspects of paediatric subspecialty development, the tasks and responsibilities will naturally be laid on those who committed themselves to a particular subspecialty. The argument about the needs of paediatric subspecialty accreditation is probably over by now. This is the current trend not only in the developed countries but also in developing countries. Without accreditation, we will be lagging behind for we have no mandate and authority to safeguard the professional standard. One can foresee those subspecialties which are not preparing to face this change may have problems in recruiting dedicated staff for further training in the future. This is because the trainee may be hesitated to join when they find out their training will not be formally recognised in non-accredited program. In addition, it may also affect the future funding and manpower allocation to such subspecialty because it will be hard to assess the actual need based on the supply and demand. Therefore, we should all gear up and work together in preparing ourselves for this major paradigm shift.

GCF Chan
Chief Editor