ABCS of Dengue Hemorrhagic Fever and Dengue Shock Syndrome: A WHO and PIDSP Collaborative Training for Pediatricians and Nurses

By: Marla B. Litam, MD

Dengue cases now occur all year round in the Philippines regardless of the wet and dry seasons. This has prompted the World Health Organization (WHO) in and the PIDSP to conduct a 5-day intensive training on the management of severe dengue hemorrhagic and dengue shock cases at the Philippine Pediatric Society Building in Quezon City last May 19-23, 2014. Fifty (50) pediatricians: general pediatricians, pediatric infectious and intensive care specialists and nurses from all over the country attended the event held at the PPS Auditorium.

Professor Siripen of Chulalongkorn University in Thailand led the all-Thai team of trainors composed of an allergologist-immunologist, a pediatric infectious disease physician and dengue nurses. They ably tackled nuances in the diagnosis and management of all kinds of dengue cases, particularly the very severe cases from a pathophysiological viewpoint. Presentations were bolstered with well-documented experience from 35,000 plus dengue cases handled through the years in Thailand and Southeast Asia.

The junior pediatricians were fortunate to attend and on the receiving end of many practical tips. Which include:

- The use plain LRS as first –line IV fluid challenge
- Use dextran 40, followed by furosemide if patient is not responding to fluid challenge and in the face of severe plasma leakage.

- Check ABCS (A-airway via pulse oximeter reading, B-bleeding, hidden and frank bleeding, C- calcium and S-sugar, blood glucose test) if patient is not responding to fluid management.
- Dopamine should be avoided in dengue hemorrhagic and dengue shock patients because normal BP from dopamine can mask prolonged shock which can cause the hepatic insufficiency and bleeding.

Monitoring of severe dengue patients on an hourly basis for vital signs, strict I and O was emphasized. The challenge is to identify hidden bleeding through serial monitoring of the hematocrit and the platelet counts. A drop in subsequent hematocrit monitoring in a deteriorating patient is an indication for blood transfusion, either pack RBC or whole blood transfusion which should be given without hesitation.

The more senior physicians, intensive care practitioners and hematologist among the participants said that with the many learning points, the training was a very productive use of their time.

Take home messages for the training were the following:

1. Diagnosis of dengue can be established with history and a tourniquet test.
2. CBC platelet count should be taken for baseline hematocrit and platelet during the febrile stage.
3. Monitor vital signs and I and O.
4. Use crystalloids and colloids as necessary but do not aggravate plasma leakage.
5. Transfuse pack red blood or whole blood at the first sign of frank and hidden bleeding.
6. FFP transfusion will aggravate congestion and should not be given.
7. Platelet transfusion is not warranted even at platelet counts below 10,000.
8. Remember your ABCS.