**Improving Microangiopathic Thrombocytopenia(MAT) Diagnosis In The Asia-Pacific Region by Standardisation of The ADAMTS-13 Assay**


**Background:**

Laboratory testing for the level of circulating ADAMTS-13 enzyme in patients suspected of microangiopathic thrombocytopenia (MAT) is crucial in distinguishing those patients with thrombotic thrombocytopenic purpura (TTP), atypical haemolytic uraemic syndrome (aHUS) and other MAT causes. The subsequent treatment, outcome and mortality are substantially different with each MAT type. A pre-plasmapheresis ADAMTS-13 level of <10% is generally accepted as confirming a TTP diagnosis when compared to aHUS. However routine laboratory testing is difficult because of variations in ADAMTS-13 assays, poor turnaround-time and little standardisation of results between individual laboratories. To overcome these concerns, the APMAT Network will examine the utilisation of identical ADAMTS-13 ELISA methods that diagnostic laboratories can adopt in centres of excellence in Asia Pacific (AP). The APMAT external quality assessment study of ADAMTS-13 assays include centres in Australia, New Zealand, China, Korea, Japan, Taiwan, Hong Kong, Malaysia, Thailand, India and Singapore.

**Aims:**

To establish the APMAT network and standardise ADAMTS-13 testing in the AP Region.

**Methods:**

The ADAMTS-13 activity and autoantibody were measured by chromogenic ELISA (Technoclone GmbH) separately detecting levels in patient plasma. The HRP-conjugated antibody is measured with a spectrophotometer through a 450nm absorbance filter. A wet laboratory workshop for laboratory scientists from each centre was undertaken in Hanoi 2014. Blinded lyophilised known ADAMTS-13 plasma samples (ECAT Foundation) are sent to each participant, with survey#1 closes July13th/2016 and survey#2 closes November30th/2016.

**Results:**

23 lead laboratories across 11 sites in the AP region have agreed to participate in the ADAMTS-13 tests for the first time. De-identified analysis of data for laboratory precision and clinical impact of the result will be undertaken; outliers will be confidentially contacted for further assistance.

**Conclusions:**

The APMAT Network, with support from ASTH, provides improved country access, a process for quality control and real world research experience of ADAMTS-13 testing in the AP Region.