

Literature review

Harmonizing light transmission aggregometry in the Netherlands by implementation of the SSC-ISTH guideline

(Munnix I.C.A. et al. Platelets)

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Light transmission aggregometry (LTA) is considered the gold standard method for evaluating platelet function. However, there is a lot of variation in protocols (pre-analytical procedures and agonist concentrations) and results. Therefore, Dutch clinical chemists used the SSC guideline as the basis for a national LTA protocol and studied the effect of standardisation. Almost all recommendations of the SSC were followed e.g. no adjustments were made of PRP, citrate concentration of 109 mM, 21 needle gauge, fasting, resting time for whole blood and PRP, centrifugation time, speed and agonists concentrations.

LTA of healthy volunteers was measured in a total of 16 hospitals; in 5 of these hospitals they were measured before and after standardisation. Results from more than 120 healthy volunteers were collected, with participating laboratories using 4 different analysers with different reagents. Use of low agonist concentrations showed high variation before and after standardisation, with the exception of collagen. For most high agonist concentrations (ADP, collagen, ristocetin, epinephrine and arachidonic acid) variability in healthy subjects decreased after standardisation.

It was concluded that a standardised Dutch protocol for LTA, based on the SSC guideline, does not lower the variability in healthy volunteers for any agonist concentrations.

This study has been published as an open-access publication in Platelets. You can download the publication using the following link: <https://www.tandfonline.com/doi/full/10.1080/09537104.2020.1771549>