Publication of the Month

April 04/09: Review: anti-phospholipid antibodies and their clinical relevance

Although diagnostic criteria vary somewhat depending on sources, Antiphospholipid Syndrome (APS) is generally defined by a repeatedly positive test for one or more anti-phospholipid antibodies (aPL) in conjunction with thrombosis or recurring pregnancy loss. The review presented highlights several important topics such as "What are aPL and how are they measured?", "Protein cofactors and definition of aPL" and "Methodological pitfalls in aPL testing by ELISA techniques". All common aPL and their role in thrombosis are discussed in detail. The most interesting part of this publication is, however, the evaluation of aPL in non-APS, non-SLE disorders. The authors conclude that aPL may have much wider clinical significance than for APS, possibly of special interest in neurology.

Horstman LL, Jy W, Bidot CJ, Ahn YS, Kelley RE, Zivadinov R, Maghzi AH, Etemadifar M, Mousavi SA, Minangar A
Antiphospholipid antibodies: Paradigm in transition
Journal of Neuroinflammation 2009, 6(3)

Objectives: A critical review of anti-phospholipid antibodies (aPL). Most prior reviews focus on the aPL syndrome (APS), a thrombotic condition often marked by neurological disturbance. The authors bring to attention recent evidence that aPL may be equally relevant to non-thrombotic autoimmune conditions, notably, multiple sclerosis (MS) and immune thrombocytopenic purpura (ITP).

Organization: After a brief history, the recent proliferation of aPL target antigens is reviewed. The implication is that many more exist. Theories of aPL in thrombosis are then reviewed, concluding that all have merit but that aPL may have more diverse pathological consequences than now recognized. Next, conflicting results are explained by methodological differences. The lupus anticoagulant (LA) is discussed. LA is the best predictor of thrombosis. However, the reason for this is not settled yet. Finally, aPL in non-thrombotic disorders is reviewed.

Conclusion: The current paradigm of aPL holds that they are important in thrombosis, but they may have much wider clinical significance, possibly of special interest in neurology. There is no doubting the close association of LA with thrombosis; but exactly why this is true remains unsettled. New evidence is presented indicating that aPL may be involved with the pathogenesis of other disorders, notably MS and ITP, as distinct from the role of aPL exclusively in thrombosis. The picture now emerging is that aPL are part of a large spectrum of autoantibodies, including, for example, those of ITP, and that APS is just one manifestation of a particular constellation of aPL. We may be better served by abandoning the concept that aPL are exclusively thrombogenic. However, full understanding of the aPL phenomenon remains a challenge for the future.