Anticoagulation therapy in the era of new anticoagulants

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Unfractionated heparin (UFH) and vitamin K antagonist (VKA) have been used for decades before the introduction of low molecular weight heparin (LMWH). LMWH has been quickly adopted as the choice of anticoagulant in children because of significant limitations associated with the use of UFH and VKA. Such adoption of LMWH as the standard of care may have impeded clinical studies in all anticoagulants. Although there are guidelines in use of these anticoagulants in children, such guidelines are supported by limited data based on clinical studies in children. For example, it took the community more than a decade to discover that the dose of LMWH required to achieve a certain anti-Xa level in neonates was significantly higher than the dose suggested by the first clinical study. With the introduction of novel oral anticoagulants in adult patients based on clinical trials, we will be tempted to adopt the use of these new anticoagulants in children. The author recommends limiting the use of new anticoagulants in clinical trials. Hopefully, we will not repeat the history of early adoption of new therapies that lead to many uncertainties about how we should use the new agents because of lack of data.

The lecture will provide: Practical guidance in the use of UFH, LMWH and VKA. Current status of clinical trials of new oral anticoagulants in children.