The Association for Clinical Biochemistry & Laboratory Medicine

Better Science, Better Testing, Better Care

Summary of NICE Guidelines

Title	Procalcitonin testing for diagnosing and monitoring sepsis
NICE Reference	DG18
Date of Review:	December 2015
Date of Publication	October 2015
Summary of Guidance (Max 250 words)	The guideline serves to evaluate the clinical and cost effectiveness of introducing procalcitonin testing to guide antibiotic treatment in children and adults with confirmed or suspected sepsis or bacterial infections. Procalcitonin is an indirect marker of bacterial causes of sepsis. Measurement of procalcitonin is proposed to reduce unnecessary use of broad-spectrum antibiotics, side effects and adverse reactions. An ELISA based method was developed by Thermo Fisher Scientific and five other manufacturers have licenced 'technically comparable' assays The guidelines critically appraise 18 studies based in intensive care and emergency department settings from various countries around the world (no studies from the UK). Study findings are discussed in the guidelines. In intensive care: • Antibiotic treatment duration was significantly reduced • With high heterogeneity between studies, procalcitonin testing significantly reduced hospital stay durations • There was no statistical impact on intensive care stay In ED • Reduced antibiotic use in adults • Increased antibiotic use for non-community-acquired pneumonia, but reduced for community-acquired pneumonia in children • Reduced antibiotic duration with procalcitonin measurement • There was no statistical impact on duration of hospital stay Costs, adverse effects and model structures are also discussed. The reviewing committee concluded that measurement of procalcitonin was unlikely to result in adverse outcomes but there was little applicability of the studies to the NHS and recommended further studies to generate robust evidence for the use of procalcitonin measurement in antibiotic treatment of sepsis in explicitly defined patient groups in different clinical settings.
Impact on Lab (See below)	☐ Moderate

Lab professionals to be made aware	✓ Laboratory Manager ☐ Chemical Pathologist ✓Clinical Scientist ☐ Biomedical Scientist
Please detail the impact of this guideline (Max 150 words)	The guidelines simply evaluated available evidence for the use of procalcitonin in patients with confirmed or suspected sepsis and therefore have little impact on current routine laboratory services. This guideline recommends further investigations into the clinical utility of procalcitonin testing so there may be cost and service implications to laboratories in hospitals where these assays are evaluated.

Impact on Lab

- **None**: This NICE guideline has no impact on the provision of laboratory services
- **Moderate**: This NICE guideline has information that is of relevance to our pathology service and may require review of our current service provision.
- **Important:** This NICE guideline is of direct relevance to our pathology service and will have a direct impact on one or more of the services that we currently offer.

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