Anti-clotting agent does not improve outcomes of patients with severe pneumonia

Use of the anticoagulant tifacogin does not appear to improve outcomes of patients with severe community-acquired pneumonia, according to an international study (Wunderink et al, 2011). The drug had shown some potential benefit in the severe community-acquired pneumonia subgroup of an earlier trial involving sepsis patients.

Tifacogin acts by blocking activated tissue factor, an essential for clot formation. In a prior trial of sepsis patients, tifacogin had shown some benefit for patients who had community-acquired pneumonia. Based on those results, Dr Richard Wunderink, professor of pulmonary and critical care medicine at Northwestern University's Feinberg School of Medicine, said researchers involved in this study, dubbed CAPTIVATE (Community-Acquired Pneumonia Tifacogin Intra-Venous Administration Trial for Efficacy), aimed to assess the efficacy and safety of tifacogin as adjunct therapy in severe community-acquired pneumonia.

In most severe community-acquired pneumonia patients, the blood clotting system is activated as part of the response to infection, in some cases interfering with circulation and leading to multiple organ failure.

In this study, researchers enrolled 2138 severe community-acquired pneumonia patients from 188 centres from 2005 to 2008, randomizing them to receive tifacogin or placebo intravenously for 4 days. Although two doses of tifacogin (0.025 mg/kg/h and 0.075 mg/kg/h) were initially included in the study, the higher dose was dropped early on when no benefit was demonstrated.

At the end of the study although tifacogin did show an effect on clotting measures in the blood, the researchers found mortality rates and the incidence of adverse events were similar in both the tifacogin and placebo groups.

'Administration of tifacogin showed no treatment benefit in this large population of patients with severe community-acquired pneumonia,' said Dr Wunderink. 'This result was consistent across a range of disease severity indices.'

Wunderink RG, Laterre P-F, Francois B et al (2011) Recombinant Tissue Factor Pathway Inhibitor in Severe Community-Acquired Pneumonia: A Randomized Trial. *Am J Respir Crit Care Med* Feb 4 [Epub ahead of print]

New fast turnaround test makes breast cancer gene sequencing quicker and more affordable

An NHS-owned genetics diagnostics company has developed new DNA sequencing methods that significantly reduce the turnaround time and cost of a major test for the identification of hereditary breast cancer risks.

NewGene, a genetic testing company jointly owned by Newcastle Hospitals NHS Foundation Trust and Newcastle University, has developed an advanced gene sequencing process to identify all mutations in the coding regions of BRCA1 and BRCA2 – two genes associated with inherited breast cancer.

The current NHS target for hereditary breast cancer testing is 8 weeks and actual timescales can be longer. The new method means hereditary breast cancer test turnaround times can be cut to as low as 4 weeks.

Dr Michael Wright, Assistant Medical Director of Newcastle Hospitals NHS Foundation Trust and Director of NewGene

Dr Michael Wright, Assistant Medical Director of Newcastle Hospitals NHS Foundation Trust and a Director of NewGene said: 'This test opens the way for NHS trusts to significantly improve the speed and quality of the service that they provide to patients and their families while halving the cost per test at the same time. This will ensure more efficient use of the financial resources that are available to diagnose and treat heritable disease.'

This is the first of a planned series of new molecular diagnostic tests due to be introduced by NewGene for other genetic conditions.

Computerized advanced dosing model in paediatrics

A study from Duke University Hospital, published in *BMC Medical Informatics and Decision Making*, described the challenging task of enhancing an established computerized provider order entry system to address the unique medication dosing needs of paediatric patients.

Long-term bisphosphonate use increases risk of atypical hip fractures

A large observational study, published in *JAMA*, confirms the association between long-term (at least 5 years) use of bisphosphonates and an increased risk of subtrochanteric or femoral shaft (atypical) fractures. The absolute risk is low, however, and long-term use significantly reduces much more numerous typical osteoporotic fractures.

Quadruple regimen better than triple for *H. pylori* eradication

The results of a Phase III study published early online in the *Lancet* indicate that 10 days of treatment with quadruple therapy is superior to 7 days of standard triple therapy in the eradication of *Helicobacter pylori*.