Old problems, Old Solutions?

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Introduction

In the midst of advances that are being made regularly in medicine with the advent of new medications, devices and techniques, it is still old solutions that are being strongly reconsidered. None so more evident than the move towards reintroducing aspirin in the prophylaxis of venous thromboembolism (VTE), particularly in elective orthopaedic surgery (1). With the number of arthroplasties increasing so does the population at risk of VTE. Although a majority of untreated VTEs are asymptomatic, a reported incidence of 35% in arthroplasty patients is a significant number. Aspirin is a supported prophylactic medication in the USA, however the UK followed a different path.

The National Institute of Clinical Excellence (NICE) published clinical guidance on VTE prophylaxis in 2007 (CG46) recommending the use of low-molecular weight heparin (LMWH) as pharmacological prophylaxis along with TED stockings as mechanical thromboprophylaxis (2). This was reinforced in CG92 (2010) (3) but introduced Factor Xa inhibitors to the mix and now, as we welcome NG89 (2018), aspirin finally makes a reappearance to be used in conjunction with LMWH for elective hip replacement and by itself for knee replacement (4).

The change in the guidelines comes from global efforts to determine how best to manage VTE but also to balance the risk of excessive wound oozing and surgical site infections seen with Xa inhibitors. NICE makes its recommendations on the basis of Level I evidence. In many randomized controlled trials (RCTs) LMWH has only been used alongside TED stockings, but studies involving Aspirin have not, hence NG89 permitting the use of Aspirin without TEDs. There have been multiple publications in the years since the CG46 guidelines demonstrating that aspirin is safe, effective and inexpensive compared to other prophylactic regimes.

Aspirin as a drug has been around since the late 19th century and despite efforts of new medications to supplant it, it has made a small comeback, especially in time of economic downturn where the low cost has certainly made it more attractive.

LMWH and Factor Xa inhibitors have benefits but the overall experience has been a standard one for any innovation, and although widely used the indications are being refined to ensure maximal benefit for patients. Development of risk stratification tools may ensure that LMWH and Factor Xa inhibitors are utilised appropriately in those with greater risk which will go a tremendous way towards personalizing thromboprophylaxis. However, a reduction in pulmonary embolism (PE) has not yet been demonstrated regardless of the thromboprophylactic regime. Reducing the fatal PE rate would be the ultimate goal, and as yet, no therapy or study has yet demonstrated an
advantage in terms of preventing this potentially fatal VTE complication.

As we continue to explore and develop innovative solutions for the most consistent and frequent problems in healthcare; understanding, acknowledging and reconsidering past solutions is vitally important to ensuring that we help patients achieve the best possible outcomes.

References


4. NICE – NG89 (2018) – Venous thromboembolism in over-16s