New European Guidelines on Venous Thromboembolism (VTE) Prophylaxis

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The European Society of Anaesthesiology is publishing original and userfriendly guidelines on the prevention of venous thromboembolism in anaesthesia and intensive care.

There are many justifications for the development of these new European Guidelines, such as:

• The steadily decreasing global post-operative VTE risk (1,2) (3,4)

• The ongoing debate about the indications of VTE prophylaxis for fast track procedures and day surgery (2,4,5)

• The questioned efficacy of elastic compression stockings in obese and elderly patients

• The continuous recommendation of aspirin despite availability of new agents (6,7)

• The increasing need for objective definitions for major/massive bleeding.

• The ACCP guidelines 2008 (8th) and 2012 (9th) are still considered by many to be the Holy Bible, despite conflicting statements, different scope of topics, lack of incorporation of recently published important papers and last but not least lack of coverage of several topics of interest for us anaesthesiologists (8,9). Thus, there is ample room for a challenging European perspective.

As a consequence of the above, a Task-Force was set up in 2015 with seven ESA representatives and eight representatives from invited societies:

- European Society of Intensive Care Medicine (ESICM), European Association of Urology (EAU), European Digestive Surgery (EDS), European Board of Colleges of Obstetrics and Gynaecology (EBCOG), European Knee Society (EKS), European Hip Society (EHS), International Society on Thrombosis and Hemostasis (ISTH) and Network for the Advancement of Transfusion Alternatives (NATA).

The driving incentive to produce these documents was to articulate an original, clinical and helpful European guideline, and not merely to implement or to extrapolate from the North-American ones (ACCP)(9), or the NICE guidelines(10). After extended discussions, the number of clinical questions (sections or chapters) was limited to 12 taking into account the benefit/risk ratios (efficacy/safety).

We chose not to start from scratch and reinvent the wheel, since one member of the leading task force members was part of the previous ACCP guidelines. ACCP was informed. However, we decided to add several clinical topics which had not been fully addressed in the 2012 ACCP guideline. The Population, Intervention, Comparator, Outcome (PICO) structured approach was used systematically.
Each clinical question focused on the perioperative prophylaxis, starting with a short rationale and ending up with a graded recommendation. It was mandatory to address the clinical relevance, the population of interest, the types of prophylaxis, the impact of duration, the assessment of benefits and harms and last but not least, if possible to provide a cost-benefit assessment.

The defined Clinical Settings of interest were:
- Surgery in the obese patient
- Surgery in the pregnant patient and during the immediate post-partum period
- Surgery in the elderly
- Day surgery and Fast track surgery
- Intensive Care
- Cardio-vascular and thoracic surgery
- Neurosurgery
- Chronic treatments with antiplatelet agents
- Coagulation disorders/ bleeding patient

Additionally, we addressed the rationale and benefits/harms of following Controversial Treatments:
- Mechanical compression
- Aspirin
- Vena Cava Filters

Litterature search and grading
After extended evaluation and discussions, the ESA Task Force came to the conclusion that the latest search strategy designed and used by the 2012 ACCP guideline-Task Force was in accordance with the best available recommendations and considered comprehensive, evidence based, robust and thorough. Thus, we were convinced that we would add very little to the level of evidence by carrying out identical search strategies for the same time-period and for similar clinical questions. As a consequence, we adopted a modified search strategy which merely updated the search findings of the 2012 ACCP guideline for the clinical questions that were of similar character.

However, for those clinical questions that were not covered by the ACCP or other recently published guidelines with the same level of scientific robustness, we carried out separate search strategies covering citations of relevance published during the last 10 years with the exception of landmark studies published prior to this deadline.

Our search strategy was not confined to randomised clinical trials, but also included observational studies in order to assess other relevant outcomes such as safety, harms and cost-effectiveness.

We adhered to ESA standards for creation of guidelines(11) and as a consequence the GRADE system for rating clinical guidelines was the cornerstone of the applied process(12). Furthermore, we incorporated the CAPRINI risk score as the risk assessment tool for the occurrence of venous thromboembolism(13).

Finally, The Appraisal of Guidelines for Research & Evaluation (AGREE) Instrument was used to address the issue of variability and to evaluate the process of our guideline development and the quality of reporting(14).

Writing the questions (rationale and recommendations)
The Guidelines Task Force nominated a pool of advisory experts that were asked to be in charge of each clinical question. In general, two or three experts were responsible for each of the defined clinical topics. Each European society proposed up to four experts to participate in creation of these guidelines. The nomination process was further adjusted by ESA to reflect a balanced distribution of experts. Finally, a total of 32 experts were chosen by the Task-force.

These new European guidelines on venous thromboembolism prophylaxis provide not only an updated comprehensive assessment of the available evidence for our defined clinical questions, but it is also the first
European multidisciplinary document to reflect the clinical perspectives pertinent to our physicians and our reality. These recommendations adhere to ESA and internationally acknowledged methodological standards and we hope to be able to successfully disseminate our recommendations to various national societies and ideally facilitate a rapid implementation of our recommendations in the clinical practice. We plan to carry out future updates of these guidelines as recommended by ESA.

References


