present clinically with chest pain, ST-changes, and troponin release.

Jean-Pierre Bassand  
Department of Cardiology  
Centre Hospitalier Universitaire Jean Minjoz  
Boulevard Fleming  
Besançon 25030  
France  
Tel: +33 381 66 85 39  
Fax: +33 381 66 85 82  
Email: jpbassan@univ-fcomte.fr

Christian Hamm  
Kerckhoff Heart Center,  
Benekestr. 2–8, 61231 Bad Nauheim  
Germany

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Non-ST-segment elevation acute coronary syndromes: an algorithm for decision

We have read with great interest the report1 of the Task Force concerning the guidelines for the diagnosis and treatment of non-ST-segment elevation acute coronary syndromes (NST-ACS). We would like to compliment the Task Force members for this excellent work, updating the previous ESC guidelines concerning that matter. In particular, the recent chapters on management of elderly patients, renal insufficiency, bleeding complications, anaemia, transfusions are new and of particular importance for the cardiological community. However, we feel a bit puzzled by the lack of a clear message concerning the recommendations on anticoagulation. Indeed, Table 11 reports six possible anticoagulation regimen without any clear recommendation regarding the drug of choice to be given as soon as the diagnostic of NST-ACS has become a working hypothesis.

Taking into account the literature, the recommendations of the ESC, and also the recently published recommendations of ACC/AHA,2 we propose a simplified analysis (Figure 1) that may help the clinicians to choose the best anticoagulation strategy adapted to their own practice.

We have used the following rules to digest the complex data on the subject:

(i) As stated in the guidelines, the decision should be made on both the acute ischaemic risk (death and MI) and the bleeding risk, which has been established as a critical issue. As a consequence, the proposed table has two entries.

(a) Assessment of the ischaemic risk could be made on ECG, troponin level (simplified method), or by using more complex scores (GRACE, TIMI, PURSUIT, for example).

(b) Assessment of the bleeding risk could be made according to the following criteria3 (in the absence of validated bleeding risk score): creatinine clearance < 30 mL/min, history of prior bleeding, female gender, age > 75, and femoral vs. radial access for catheterization. The former criterion has been chosen given the fact that >85% of major bleed are related to catheterization access.

![Figure 1](https://academic.oup.com/eurheartj/article-abstract/29/2/279/435267)  
*A simplified analysis to choose the best anticoagulation strategy
site. High risk for bleeding has been defined when the patient condition met at least two of the pre-defined criteria (≥ 2).

(ii) The invasive strategy has also been considered in this table according to the individual bleeding and ischaemic risk.

(iii) Unfractionated heparin has been downgraded, as the most recent studies showed superiority of all new anticoagulation regimens which were either safer or more effective. Although the impressive efficacy and low incidence of bleeding complications with fondaparinux compared with enoxaparin are well accepted, it appears that the lack of superiority in PCI patients and the risk of catheter thrombosis preclude the use of this drug when an invasive strategy is considered. Bivalirudin monotherapy compared with heparin plus IIb/IIIa inhibitors resulted in non-inferior rates of composite ischaemia but significantly reduced major bleeding.

(iv) Finally, we still re-emphasize to avoid switching from one to another anticoagulant, which implies to limit the number of anticoagulants available in the same centre. Indeed, misuse, excess dosing, and/or mixing of various anticoagulants expose the patients to unacceptable risk of bleeding.

We think that this simple and practical table is an acceptable and handy summary of the current information on this rapidly evolving topic.

References

Michel E. Bertrand
Lille Heart Institute
Boulevard du Pr. Leclercq
59037 Lille
France
Tel: +33 3 20 92 13 34
Fax: +33 3 20 00 65 09
Email: mbcardio@club-internet.fr

Jean Philippe Collet
Institut du Coeur
83 bvd de l’Hôtel 75013 Paris
Paris
France

Gilles Montalescot
Institut du Coeur
83 bvd de l’Hôtel 75013 Paris
Paris
France

Non-ST-segment elevation acute coronary syndromes: an algorithm for decision: reply

We read with great interest the letter by Bertrand et al. and appreciated their positive comments about the recently published guidelines on management of non-ST-segment elevation acute coronary syndromes, especially concerning the new chapters included in the document on topics such as special populations, complications, bleeding, and the problems posed by blood transfusions. However, Bertrand et al. indicate that there is no clear recommendation about the use of anticoagulation, and base their argument on the fact that six possible anticoagulation regimens are provided in Table 11 of the article. They suggest that both ischaemic and bleeding risks should be taken into consideration before deciding on treatment strategy and anticoagulation. Their comments are illustrated by a figure describing which anticoagulant to use, and how, depending on the risk of bleeding and the risk of ischaemic events.

We share the view of the authors that the choice of anticoagulation should depend on bleeding risk and therefore gave clear recommendations in bold at the end of the respective chapter (pp. 1615–1616). Table 11 simply refers to all currently available anticoagulants, as many of the drugs listed in this table may not be available in every country in Europe and around the world. As the class of recommendation in these guidelines is based on the efficacy—safety profile, fondaparinux is proposed as first-line anticoagulant on the basis of the fact that it has a better efficacy—safety profile than enoxaparin in the Oasis-5 study. The other available low molecular weight and unfractionated heparins cannot be recommended over fondaparinux because there has been no direct comparison between these compounds and fondaparinux. The use of bivalirudin was recommended only in the setting of percutaneous coronary intervention, since the ACUITY trial suffers from some methodological shortcomings, described in the corresponding section of the guidelines document. Thus, all the remarks made by Bertrand et al. are actually addressed in detail in the article.

Furthermore, Bertrand et al. propose using a risk score to grade the risk of bleeding. However, although the individual predictors of bleeding have been clearly identified through registries and clinical trials, there is no generally accepted risk score for bleeding. The only existing score has recently been described on the basis of the data from the