The Belgian Improvement Study in Oral Anticoagulant Therapy: a randomized clinical trial

We read with great interest the article by Claes et al. about The Belgian Improvement Study on Oral Anticoagulant Therapy. The randomized clinical trial compares different interventional models to improve the quality of oral anticoagulant therapy in general practitioners' (GP's) practice who mainly manage the control of anticoagulation. In Hungary, arterial and venous vessels diseases have a great impact on morbidity and mortality data, so the quality of oral anticoagulation is essential.

Last year, we published a retrospective survey on the use of an oral anticoagulant, acenocoumarol, by specialists, mainly in outpatient departments (cardiology or general internal medicine) or GPs. We collected and analysed the data of 488 patients treated with this agent. The patients' mean age was 64.2 ± 11.4 years. Most of them were treated for atrial fibrillation (42.8%) and venous thrombo-embolic events (29.7%). The mean value of all coagulation test results (INR: 2.72 ± 1.07) suggested a relatively effective therapeutic quality. The accuracy of oral anticoagulant therapy was evaluated on the basis of the last three INR values. Patients were considered properly treated if their INR values were found to be between 2.5 and 3.5. In half of the patients, we detected INR values within the required range at least in two out of the three control lab tests. According to the guidelines on oral anticoagulation, >50% of results of the anticoagulation control should not deviate more than 0.5 INR unit from the target one. In our survey, 20% of the patients had their INR values outside the therapeutic limits. Forty per cent of these values were under 2.2 and 20% above 4.5, the latter group showing an increased risk for bleeding events. Data in the literature indicate that the risk of serious bleeding complications with acenocoumarol is 0.5–4.2%. In the Italian Study on Complication of Oral Anticoagulant Therapy, the frequency of serious bleeding events was found to be 1.1%. We had no patients with serious bleeding event and only 3.6% had a mild bleeding episode. Patients >70 years (n = 195) had similar results to the average in therapeutic accuracy and in the safety data. At present, home self-control is not available in general practice, but we plan to introduce this method in the permanent anticoagulant therapy of selected patients. It is very important to emphasize the pivotal role of educating permanent patients. The paper of Claes et al. presents useful advise for improving the quality of anticoagulation performance.

References


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What is the most useful and cost-effective strategy to screen for left ventricular systolic dysfunction in clinical practice?

With interest we read the article ‘What is the most cost-effective strategy to screen for left ventricular (LV) systolic dysfunction: natriuretic peptides, the electrocardiogram, hand-held echocardiography, traditional echocardiography, or their combination?’ by Galasko et al. However, we do not agree with the conclusion that the electrocardiogram (ECG), the N-terminal pro-brain natriuretic peptide (NTproBNP), and hand-held echocardiography (HE) can be used cost-effectively for screening and that the most cost-effective approach involves pre-screening with NTproBNP or ECG prior to HE prior to formal traditional echocardiography (TE).

Both the ECG and the NTproBNP are important and fundamental tests used for the diagnosis of heart failure. However, as their characteristics differ from the echocardiogram, they cannot necessarily be used as substitutes for the echocardiogram. As for screening tests, high sensitivity is required at the expense of specificity. In the high-risk group in this study, the sensitivity of ECG declined to 90% and that of NTproBNP to 76%. Given the high prevalence, the sample size is large and the sensitivity of the high-risk group would reflect the real value. Moreover, when a two-step screening strategy (ECG or NTproBNP combined with HE) is used, the sensitivity further decreases. Although a cost saving is achieved, the number of false-negative results increases, which cannot be disregarded in the high-risk group because of the negative consequences associated with a missed diagnosis. In contrast, the sensitivity of HE remained at 97% even in the high-risk group. This implies that even HE is a useful screening test for LV systolic dysfunction, as more true-positive patients would be identified than with the two-step screening strategy.

Finally, the authors' sensitivity analysis used an increased cost for HE, from 37.5 € to 50 €. If, on the other hand, the cost for HE decreased a little from 37.5 € to 30 €, then the cost-effectiveness of HE alone prior to TE would be more cost-effective than ECG prior to HE prior to TE. Thus, HE alone strategy would be the most useful and cost-effective and identify more true-positive patients in clinical practice than the two-step screening strategy proposed.

References

1. Galasko GI, Barnes SC, Collinson P, Lahiri A, Senior R. What is the most cost-effective strategy to screen for left ventricular systolic dysfunction: natriuretic peptides, the electrocardiogram, hand-held echocardiography, traditional echocardiography, or their combination? Eur Heart J 2006;27:193–200.

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