Editorial

Importance of guideline adherence for unstable angina pectoris and prevention of serious cardiovascular events by conforming to guidelines

Breuckmann and colleagues [1] report a retrospective study in which they examined the status of adherence to the European Society of Cardiology (ESC) guideline on the management of unstable angina pectoris (UAP) [2] in certified chest pain units (CPU) in Germany, and the difference in incidence of cardiovascular events as an outcome of treatment strategy.

This report has several outstanding features. First, the study analyzed relatively recent data of consecutive patients presenting at 30 CPU in Germany because of chest pain between December 2008 and July 2013. Second, the diagnosis was based on that at discharge and not at the diagnosis at the emergency department; hence, a complete diagnosis of UAP was performed. Third, the entry of 1400 case within a short period of 5 years can only be achieved with a multicenter study; the fact that all the cases had a complete follow-up was an additional merit.

Focusing on analysis based on percutaneous coronary intervention (PCI), the difference between Germany and Japan becomes evident. Obviously, the indication for PCI has to be determined as for coronary artery bypass graft surgery (CABG) [3]. As in the SYNTAX trial, scoring the lesion morphology and using the scores to stratify risk is an important additional element when deciding treatment strategy [4]. In the present study, a total of 518 patients (37%) underwent PCI. Of these, 344 patients (24.6%) underwent PCI within the first day of admission as early elective strategy; 19 (1.4%) of whom underwent PCI within 2 h; and 174 patients (12.4%) underwent PCI within 72 h of admission as late elective strategy.

Comparing to the current situation in Japan, the percentage of patients undergoing PCI appears to be higher in Japan than in Germany. Moreover, the duration from admission to PCI seems to be shorter in Japan. A possible reason is that cardiac angiography is used frequently, which provides a favorable environment for conducting PCI. Another factor is the use of coronary computed tomography (CT) in suspected cases of UAP, which allows the detection of stenosis at an early stage. In addition, since the prevalence of vasospastic angina pectoris is known to be higher in Japan than in American and European countries, special attention is paid to this condition in the diagnosis of UAP. When a patient presents at the emergency department with chest pain but no other symptoms and electrocardiographic changes, many facilities would conduct coronary CT if UAP is suspected. Earlier detection of stenosis may contribute to the higher PCI rate in Japan.

The objective of the study was to examine the effect of guideline adherence on the incidence of cardiovascular events. Undertreatment was found in 53.2% of high-risk patients. Overall guideline non-adherence was observed in approximately two-thirds (61.8%) of the patients. In the non-guideline-adherent patients, the frequencies of conditions known to be coronary risk factors, such as hypertension, hyperlipidemia, and diabetes were significantly higher than in guideline-adherent patients. This finding is surprising, highlighting the glaring fact that guidelines are not adhered to in the clinical setting. Surely, apart from the guideline, which provides the minimum necessary knowledge, other factors may have contributed to deciding management strategy. However, the fact that approximately two-thirds of the patients were not treated according to the guideline would prompt us to consider the possibility that the guideline does not meet the needs in the clinical setting, or that the guideline cannot be implemented even though physicians are aware of its contents. It is unlikely that the guideline does not meet clinical needs at all; therefore, the second possibility that the guideline cannot be applied clinically even though the physicians are aware of the contents would be more plausible. As a result of non-adherence to the guideline, the rates of major adverse coronary and cerebrovascular events (MACCE), CABG, and rehospitalization for cardiovascular reasons are increased, as proven by the data in this study. The difference in rate of MACCE (1.6% for adherence vs. 4.0% for non-adherence, p < 0.05), an important outcome, is of particular concern. Although the hard end point of death was not significantly different, the p-value was 0.08, and a tendency of increase is not an overstatement. Given these significant differences during a short observation period of 3 months, the differences are anticipated to be amplified further in the long term. Although the data of this study emphasize that guideline-adherent treatment reduces cardiovascular events, other issues remain. One difficult problem is the early treatment of troponin-negative, non-ST elevating UAP, and further studies are anticipated.

In Japan, there is no information on the frequency of adherence to the ESC guideline or on the effect of conformation to guidelines on cardiovascular events. Hence, the editor is keenly aware of the importance of the present article and anticipates that by reading this article, cardiovascular physicians in Japan will recognize the importance of guidelines in the clinical setting. Last but not the least,
the editor would like to express appreciation to the authors for submitting this article to Journal of Cardiology.

References


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