To discharge or not to discharge?

Sortir ou ne pas sortir de l’hôpital?

Over the past 30 years, dramatic improvements have been achieved in the safety of percutaneous coronary intervention (PCI) procedures, despite the increasing complexity of the clinical and anatomical conditions treated. PCI in a day-case setting may reduce logistic constraints on hospital resources, but data on safety are limited. Previous studies have demonstrated that short-term observation after PCI is safe, and that patients could be adequately selected for additional observation in case of anticipated postprocedural complications. In a major randomized trial, Heyde et al. compared same-day discharge with overnight hospital stay after femoral-approach PCI [1]. In this work, four hours after PCI, patients were triaged as suitable for early discharge or kept overnight. Primary end points were death, myocardial infarction, coronary artery bypass graft surgery, repeat PCI, or puncture-related complications occurring within 24 h after PCI. A total of 403 patients were assigned to same-day discharge, of whom 77 (19%) were identified for extended observation; a total of 397 patients were assigned to overnight stay, of whom 85 (21%) were identified for extended observation. Among all patients, the composite primary end point occurred in nine (2.2%) same-day discharge patients and in 17 (4.2%) overnight stay patients (risk difference, −0.020; 95% confidence interval [CI], −0.045 to −0.004; p for noninferiority less than 0.0001). Among patients deemed suitable for early discharge, the composite end point occurred in one of 326 (0.3%) same-day discharge patients and in two of 312 (0.6%) overnight-stay patients (risk difference, −0.003; 95% CI, −0.014 to 0.007; p for noninferiority less than 0.0001). These three events were related to puncture sites.

In this issue of Archives of Cardiovascular Diseases, Chaumeil et al. [1] investigated the feasibility of outpatient coronary angioplasty with ‘ad hoc’ angioplasty. Several aspects of this study deserve comment.

First of all, in the study by Heyde et al. [2], patients were selected after PCI, and patients were excluded in case of ad hoc PCI and/or scheduled use of abciximab. In the present study, even though PCI was ad hoc in 100% of patients and 26.1% received glycoprotein IIb/IIIa receptor antagonists, no serious complications occurred. Moreover, in the study by Heyde et al. [2], using the femoral approach, the rate of false aneurysm, arteriovenous fistula and haematoma above 5 cm occurred in, respectively, 0.8, 0.25 and 5% of patients in the two groups; while in the present study, radial access was used with excellent results thus confirming the importance of patient selection.

The second point is the extended hospital stay after PCI, 18% for Heyde et al. [2] and 24.4% for Chaumeil et al. [1]. These data confirm that the decision for same-day discharge...
can be made only after an uncomplicated clinical course of at least four hours, and that triage at this time is pivotal for safety. The reasons for not discharging patients were generally procedural but also postprocedural.

A recent paper by Small et al. [3] evaluated the time-frame of postprocedural complications following transradial PCI in a non—low-risk patient cohort (1543 ACC type B2 or C lesions were treated in 1174 patients). In this large database, all postprocedural complications were identified within six hours of the intervention or occurred more than 24 h later. The authors concluded that day-case transradial percutaneous intervention with a 6-h period of postprocedure observation is a safe and feasible practice, and that the presence of higher risk features should not be considered an absolute indication for overnight admission in patients considered clinically appropriate for discharge.

Finally, a recent paper by van Gaal et al. [4] demonstrated that the selection of patients for day-case PCI is safe and can achieve a high rate of success with excellent long-term outcomes [3].

In conclusion, the present paper confirms that outpatient coronary angiography and ad hoc angiography are feasible, safe, more comfortable for the patient and more cost-effective than staged procedures. However, the immediate postprocedure period needs to be managed appropriately.

References


Yves Cottin*, Luc Lorgis
Service de cardiologie, CHU Bocage, boulevard Mal-de-Lattre-de-Tassigny, 21034 Dijon, France

*Corresponding author.
E-mail address: yves.cottin@chu-dijon.fr (Y. Cottin).

Received 23 May 2008; accepted 28 May 2008
Available online 31 July 2008