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## EDITORIAL COMMENT

# Same-day discharge after elective percutaneous transluminal coronary angioplasty: An instruction manual and call for increased uptake in a burdened National Health Service



## Alta no próprio dia após intervenção coronária percutânea eletiva: manual de instruções e repto a maior utilização num Serviço Nacional de Saúde sobrecarregado

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Percutaneous transluminal coronary angioplasty (PTCA) celebrates its 43rd birthday in 2020. Since Andreas Gruntzig first performed this technique in 1977, and Ricardo Seabra-Gomes introduced it to Portugal in 1984, countless technological and procedural developments have significantly increased the success and safety of PTCA. What first started as a high-risk procedure, with cardiac surgery on standby, is currently an outpatient procedure in many places. Early mobilization and discharge after angioplasty enable same-day discharge (SDD), instead of an overnight stay (ONS). In spite of this, the use of SDD varies dramatically according to country and even among centers located close to each other. In Portugal, SDD after PTCA is not the standard of care.

In this issue of the Portuguese Journal of Cardiology, Centro Hospitalar de Gaia/Espinho, V. N. Gaia (CH Gaia), paves the way for increasing SDD in Portugal by publish-

ing the first Portuguese report that describes ONS and SDD populations and compares outcomes after elective PTCA. The study by Alberto Rodrigues et al.<sup>1</sup> is a contemporary (2018), prospective, observational, single-center cohort study that included 155 consecutive patients who underwent elective (scheduled or ad-hoc) PTCA over one-year. Patients were routinely placed in a nurse-led eight bed recovery room, where they stayed until hospital discharge. Importantly, CH Gaia's current practice does not include post-procedure electrocardiogram (ECG) or enzyme assay unless there is clinical suspicion of complications, and the minimum in-hospital surveillance was of four hours. Despite the existence of a locally approved protocol for SDD that selects non-complex patients/procedures, the operator was free to decide patient's course at his or her discretion, professional opinion and specific context. Femoral access did not preclude SDD, especially when vascular closure devices were successfully used. SDD patients received telephone follow-up at 24 h and 30 days post-procedure. The investigators found that patient convenience (28.8%, caused primarily by the end of the procedure after 16:00 hours) and operator preference (22.5%) were the main reasons for ONS.

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Regarding safety, all relevant complications were intraprocedural or early after the procedure, supports the case for a four-hour observation period post-PTCA being sufficient for surveillance. There were no major adverse cardiac and cerebrovascular event between 4 and 24 hours, nor at 30 days. At 24 hours and between one and 30 days, more SDD patients had unplanned visits (9.3% vs. 0.9%,  $p=0.02$ ); most cases were non-procedure-related or were easily managed with patient reassurance.

SDD after elective PTCA is not, by any means, novel; the first reports of its use date back to the mid-1990s.<sup>2</sup> The study by Alberto Rodrigues et al. further confirms the safety of SDD in a national cohort, but this is not its greatest merit – SDD safety has been demonstrated in randomized clinical trials and even meta-analysis.<sup>3,4</sup> This evidence led the influential Society for Cardiovascular Angiography and Interventions to endorse SDD in 2018.<sup>5</sup> In my opinion, the call to action for an increased uptake of SDD in Portugal and how to implement it are the take-home messages from Rodrigues' paper. Certainly, all Portuguese interventional cardiology laboratories have at some point discharged an elective PTCA on the same day of the intervention - usually a morning surgery patient who underwent a straightforward intervention, on a day where there was a particular shortage of hospital beds. Needless to say, the current COVID-19 pandemic will become an even more likely trigger for SDD. So, what can other laboratories learn from CH Gaia's study?

First, that a nearby recovery room, led by nursing staff with on-demand support from an interventional cardiologist, is necessary. This so-called Radial Lounge,<sup>6</sup> with dedicated reclining chairs and commodities such as television or WIFI, allows for a four to six-hour period of observation with telemetry and full equipment for emergencies.

Second, the short four-hour observation after PTCA in the present study was previously described twenty years ago<sup>7</sup> and is safe. The option not to include post-procedure ECG or enzyme assay, unless there is clinical suspicion of complications, is still a matter for discussion. The high cutoffs<sup>8</sup> necessary for clinical impact are unlikely to occur in asymptomatic patients, and as such the strategy of testing only symptomatic patients is an established practice in many centers.

Third, the need for a systematic 24 h and 30-day telephone follow-up that enables safety monitoring and patient education and reassurance.

Fourth, the need for local discussion and acceptance of standard criteria for SDD or ONS. It is well known that SDD is more frequently used among male and younger patients with fewer comorbidities. Rodrigues et al. defined ONS criteria, but in routine practice, the interventional cardiologist's immediate post-PTCA assessment and patient willingness to be same-day discharged, if they live within an acceptable hospital distance, are probably more important.

Not discussed by the authors, but also very important, is the issue of reimbursement. This has been suggested as the likely reason for a very limited uptake of SDD in healthcare systems in the United States of America<sup>9</sup> or Australia,<sup>10</sup> in contrast with the United Kingdom<sup>11</sup> or Canada.<sup>12</sup> In Portugal, some hospitals require overnight stay for full reimbursement of PTCA. Since SDD has a well-established economic advantage,<sup>9</sup> this issue must be addressed with the hospital

and upstream payors (the national healthcare system or the insurance companies).

In conclusion, we must praise Alberto Rodrigues and colleagues from CH Gaia for challenging the Portuguese cardiology community to embrace same-day discharge after PTCA. It is safe and it is cheaper, so why shouldn't we offer it to our patients?

## Conflicts of interest

The author has no conflicts of interest to declare.

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