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EDITORIAL COMMENT

Cardiac surgery is still necessary in the treatment of left main disease

A cirurgia cardíaca ainda é necessária no tratamento das lesões do tronco comum

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Left main coronary artery disease (LMCAD) is undoubtedly one of the highest-risk situations in atherosclerotic coronary disease. This diagnosis frequently requires urgent therapeutic decisions involving not only physicians in the cath lab but also the surgical team. The high risk associated with this clinical situation is due to the fact that LMCAD, by reason of its location, compromises the blood supply of a large and important area of myocardium.[1] Until 15 years ago LMCAD was treated as a surgical entity and only recently has percutaneous coronary intervention (PCI) been considered for this condition.[2] The review by Manuel Martins published in this issue of the *Journal*[3] analyzes four recent randomized clinical trials, aiming to establish a paradigm for action by comparing coronary artery bypass grafting (CABG) and PCI with drug-eluting stents (DES) for the treatment of LMCAD.

Martins' analysis of these clinical trials hypothetically identifies advantages of PCI with DES in this complex and critical pathology. I use the word ''hypothetically'' because in this review, factors clearly advantageous for CABG, especially in the NOBLE and EXCEL trials,[4,5] are not mentioned. Likewise, major adverse cardiac and cerebrovascular clinical events, as well as repeat procedures, occur more often with PCI than with CABG in all the trials and with statistical significance.

In another of the trials analyzed, SYNTAX, the results are more beneficial with CABG, especially in cases with high SYNTAX scores (>23), but the author suggests that with second-generation DES this benefit may decrease.[6] He also suggests that use of the new SYNTAX II score might shift the balance in favor of PCI.

I agree with these suggestions, but would point out that performing CABG exclusively with arterial grafts and using extracorporeal circulation would certainly alter the results of comparisons between the two procedures.[7]

One outcome of adopting the PCI approach that involves major risks for patients results from extrapolating from international results to the Portuguese situation. Experience with revascularization of LMCAD is much wider in other countries and facilities for emergent transfer of patients for surgical backup in this country are not comparable. Of the 25 centers in Portugal that can perform PCI, only 10 have surgical backup, which means that more serious cases of LMCAD diagnosed in centers without such backup need to be transferred to units where it is available.[8]

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Conflicts of interest

The author has no conflicts of interest to declare.

References

1. Leitão Marques AM. Doença do tronco comum. Aspectos do seu diagnóstico e tratamento. Acta Méd Portuguesa. 1991;4:325–8.
2. Serruys PW, Morice MC, Kappetein AP, et al. Percutaneous coronary intervention versus coronary-artery bypass grafting for severe coronary artery disease. N Engl J Med. 2009;360:961–72.
3. Martins MN. Percutaneous coronary intervention versus coronary artery bypass grafting in left main coronary artery disease: a review. Rev Port Cardiol. 2022;41, http://dx.doi.org/10.1016/j.repc.2021.06.026.
4. Makikallio T, Holm NR, Lindsay M, et al. Percutaneous coronary angioplasty versus coronary artery bypass grafting in treatment of unprotected left main stenosis (NOBLE): a prospective, randomised, open-label, non-inferiority trial. Lancet. 2016;388:2743–52.
5. Stone GW, Sabik JF, Serruys PW, et al. Everolimus-eluting stents or bypass surgery for left main coronary artery disease. N Engl J Med. 2016;375:2223–5.
6. Morice MC, Serruys PW, Kappetein AP, et al. Outcomes in patients with de novo left main disease treated with either percutaneous coronary intervention using paclitaxel-eluting stents or coronary artery bypass graft treatment in the Synergy Between Percutaneous Coronary Intervention with TAXUS and Cardiac Surgery (SYNTAX) trial. Circulation. 2010;121:2645–53.
7. Benedetto U, Puskas J, Kappetein AP, et al. Off-pump versus on-pump bypass surgery for left main coronary artery disease. J Am Coll Cardiol. 2019;74:729–40.
8. Registo Nacional de Síndromes Coronárias Agudas. 15 anos de um registo prospetivo contínuo. Available from https://spc.pt/2019/10/28/registo-nacional-de-sindromes-coronarias-agudas