European Journal of Preventive Cardiology

Letter to the Editor

European Journal of Preventive Cardiology
0(00) 1–2

DOI: 10.1177/2047487313501238
ejpc.sagepub.com
SAGE

Rebuttal to the letter 'Meta-analysis of biodegradable versus durable polymer drug eluting stents in coronary artery disease: The reality?' of Kwong et al.

Alessandro Lupi[1], Andrea Rognoni[1], Gioel G Secco[2] and Angelo S Bongo[1]

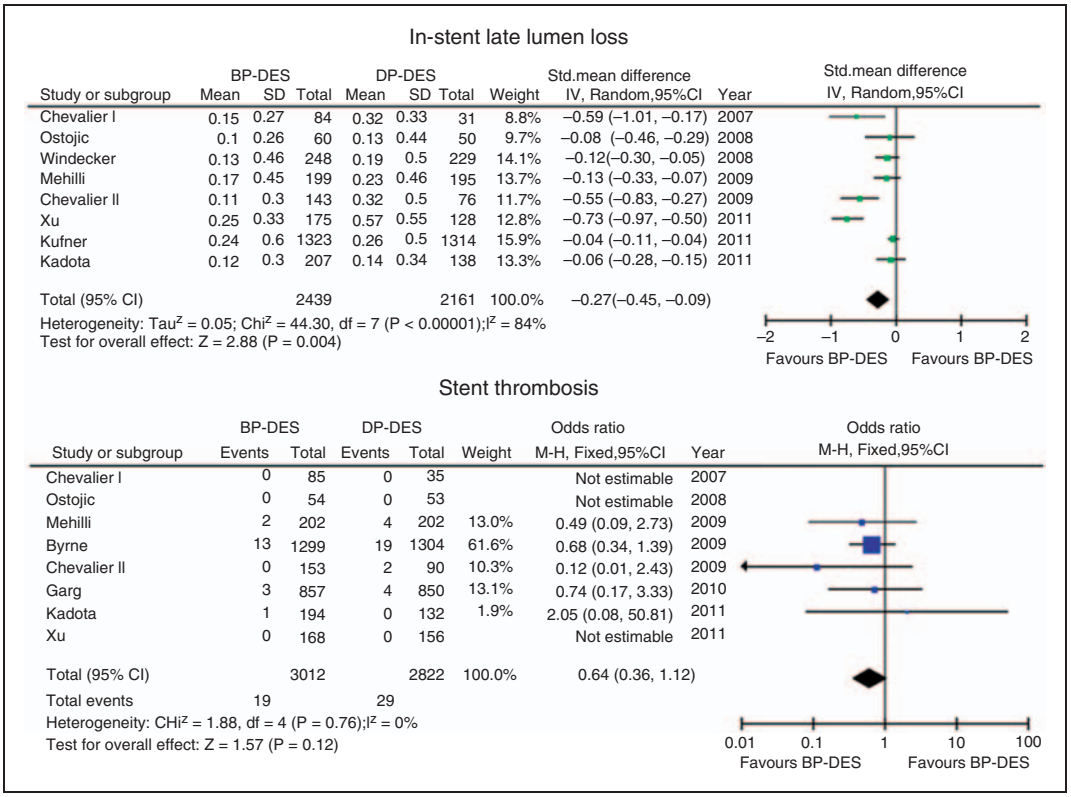

Figure 1. Analyses for in stent late lumen loss and stent thrombosis using homogeneous 1 year follow up data. BP-DES, bioabsorbable polymer drug eluting stent; DP-DES, durable polymer drug eluting stent; SD, standard deviation; CI, confidence interval; IV, inverse variance; M-H, Mantel- Haenszel.

We read with interest the letter of Kwong et al. regarding our recent publication in the journal.[1] Our colleagues, despite recognizing the global value of our study, raised a few methodological concerns about our meta-analysis.

First, Kwong et al. point out that our study is a meta-analysis of randomized studies, questioning the inclusion of NOBORI Core and TIVOLI studies which, indeed, are non-randomized trials.[2,3] Our meta-analysis aimed to summarize the most complete information available in a field in which published data is rather limited. When the question of interest cannot be answered only by the inclusion of randomized trials, authors may be justified in including non-randomized

[1]Hospital Cardiology, 'Maggiore della Carità' Hospital, Italy
[2]Department of Clinical and Experimental Medicine, University of Eastern Piedmont, Italy

Corresponding author:
Alessandro Lupi, Cardiologia Ospedaliera, Ospedale Maggiore della Carità, Cso Mazzini 18, 28100 Novara, Italy.
Email: lupialessandro1@tin.it

studies.[4] In such cases, every effort should be made to explore and mitigate heterogeneity, considering pre-specified covariates as potential confounders in meta-regression analysis, using a more conservative random model in odds ratio calculations, and performing subgroup analyses limited to the more homogeneous subgroup of patients (in our study we pre-specified a subgroup with only randomized controlled trials).[5] This approach was pre-specified in the 'Methods' section of our paper and was done in our analysis, obtaining results substantially similar to the main analysis.[1]

Secondly, Kwong et al. observed that data of the ISAR-TEST-3 two-year follow-up report[6] were pooled with other studies reporting angiographic data at 6–9 months and clinical follow up data at one year. This was done with the purpose of extending the follow-up of subjects observed for rare clinical events, given the paucity of data regarding the late stent thrombosis. This actually had no significant impact on the results of the analysis, as demonstrated in Figure 1 where the analyses were conducted using the shorter follow up data.

Finally, Kwong et al. correctly observed that in Figure 1 we reported a wrong figure of 11 trials excluded, while in Table 2 we correctly listed 12 studies. We also agree with the observation that the number of included studies should have been eight, while the figure of 10 refers to the included reports, and that the latest citation of the *Cochrane handbook* is March 2011. However these minor inaccuracies do not substantially change the figures of our analysis.

We greatly appreciate the interest of our colleagues in our work and we are grateful for the opportunity they gave us to further clarify it. We also agree that minor formal details are important to maintain a high degree of quality of a meta-analytic study. However, taking into account Kwong et al.'s criticisms and suggestions did not change substantially our results and further strengthened the global message of our study.

Funding

This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.

Conflict of interest

The authors declare that there are no conflicts of interest.

References

1. Lupi A, Rognoni A, Secco GG, et al. Biodegradable versus durable polymer drug eluting stents in coronary artery disease: Insights from a meta-analysis of 5834 patients. *Eur J Prev Cardiol* 2012; in press.
2. Ostojic M, Sagic D, Beleslin B, et al. First clinical comparison of Nobori -Biolimus A9 eluting stents with Cypher-Sirolimus eluting stents: Nobori Core nine months angiographic and one year clinical outcomes. *EuroIntervention* 2008; 3: 574–579.
3. Xu B, Dou KF, Han YL, et al. A prospective multicenter parallel-controlled trial of TIVOLI biodegradable-polymer-based sirolimus-eluting stent compared to ENDEAVOR zotarolimus-eluting stent for the treatment of coronary artery disease: 8-month angiographic and 2-year clinical follow-up results. *Chin Med J (Engl)* 2011; 124: 811–816.
4. Higgins JPT and Green S. *Cochrane handbook for systematic reviews of interventions. Version 5.1.0* Updated March 2011. The Cochrane Collaboration, 2011. Available from www.cochrane-handbook.org.
5. Navarese E, Lupi A, Buffon A, et al. Meta-analysis of non-randomized studies in interventional cardiology: A critical appraisal. *Ital J Public Health* 2009; 6: 303–306.
6. Byrne RA, Kufner S, Tiroch K, et al. Randomised trial of three rapamycin-eluting stents with different coating strategies for the reduction of coronary restenosis: 2-year follow-up results. *Heart* 2009; 95: 1489–1494.