LETTERS TO THE EDITOR

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Late stent malapposition: innocent phenomenon or major risk marker?

We read with great interest the meta-analysis of Hassan et al.,1 including 17 studies, demonstrating that the risk of late-acquired stent malapposition (LASM), as detected by intravascular ultrasound (IVUS), was 4.4-fold higher in patients treated with drug-eluting stents (DES) when compared with those receiving bare metal stents (BMS). Furthermore, in this comprehensive systematic review, the risk of late stent thrombosis (ST) (data from five studies) was 6.5-fold higher in patients with late stent malapposition (LSM). Interestingly enough, to address the very low incidence of LASM, LSM, and ST, multiple, sophisticated statistical analyses were required. Authors should be commended for this thorough study that empowered them to demonstrate that LSM has, indeed, major clinical implications. Previous individual studies have already demonstrated that LASM is more frequent after DES than after BMS. However, until now, the potential clinical consequences of LSM remained highly controversial.2,3 In two previous prospective IVUS studies performed during episodes of BMS and DES thrombosis, respectively, we previously suggested that LSM was a risk factor for this dreadful complication.4,5 In these studies we analysed the other side of the same coin and demonstrated that most patients suffering from BMS or DES thrombosis actually presented LSM.4,5 The current meta-analysis provides the complementary information required in the field and robust data suggesting the clinical implications of this unique phenomenon. Unfortunately, a dedicated figure, detailing the data (OR, 95% CI) supporting such important findings, namely the clinical consequence of LSM, was not provided, yet would have been of interest. A dedicated figure, detailing the data supporting such important findings, it appears reasonable to recommend an indefinite dual antiplatelet regimen for these patients unless an increased bleeding risk is perceived.

References

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Late stent malapposition: innocent phenomenon or major risk marker? reply

We would like to thank Alfonso et al.1 for the interest shown in our meta-analyses, for their compliments to us for undertaking such a delicate effort, and for writing a concise and interesting letter concerning our paper. It is our pleasure to try to respond to the raised appreciated comments.

Indeed, previous intravascular ultrasonography studies (IVUS)2–4 had the merit of identifying stent malapposition as a potential underlying mechanism for stent thrombosis (ST) but also, of equal importance, the usefulness of IVUS analyses in characterizing the pattern and mechanism of such complication. One of our main objectives was therefore to investigate the relation between IVUS documented stent-malapposition and ST. To best serve this purpose, we completely agree with Dr Alfonso et al. that a dedicated dedicated figure would have been of interest. However, according to our predefined selection criteria, the number of papers provided only a limited number of cases. In such circumstances, our colleague and co-author Professor T. Stijnen (a reputed specialist in meta-analyses techniques)5–7 advised against a graphical representation of our ST findings and preferred a table that could summarize the findings and explain the analysis technique in a comprehensive way (Table 2). The relatively scarce data availability regarding ST did not allow us to perform two separate analyses, one with ‘late’ (<12 months) ST and another one with ‘very late’ (>12 months) ST in relation to the presence of late stent malapposition. We did consider that such data may bring valuable information and, as a consequence, we have presented values of ST separately (‘late’ and ‘very late’) on two columns in Table 2.

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