Commentary: The International Registry of Acute Aortic Dissection as a Source of Real-World Data

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The annual incidence of aortic dissections (AD) is 3/100,000 [1], remaining a challenging scenario with a reported 5-year survival rate between 55% and 85% in acute cases of type A and type B AD [2–3] and operative mortality as high as 12% [4]. The lethality rate is approximately 1% per hour initially and 50% by the third day for untreated individuals [5]. In such acute setting, it is surely difficult to carry out prospective randomized studies and, while these studies do not come to fruition, the medical community has no other option but to rely on registries to establish guidelines and achieve the best outcomes possible when delivering health care to this particular group of patients.

Almost 3 decades ago, the International Registry of Acute Aortic Dissection (IRAD) [6] was established to create a large, multicenter database including AD patients treated at centers from all over the world with the primary objective of assessing clinical presentation, diagnosis, management and outcomes.

Recently, Trimarchi et al. [7] conducted a study to evaluate IRAD’s impact on the promotion of the understanding and management of acute AD over its first 25 years of existence and found IRAD to be highly impactful. The data originated from the analysis of more than 10,000 patients have been consistently considered by cardiovascular societies all over the world and have been highlighted in almost all guidelines or consensus documents on both sides of the pond.

According to Trimarchi et al. [7], among the most impactful findings generated by IRAD studies were the following:

1. partial thrombosis of the false lumen as a predictor of post-discharge mortality in type B AD;
2. methods other than aortic size alone should be considered to identify patients at high-risk for dissection;
3. no statistically significant differences in survival for aortic intramural hematoma if treated or untreated;
4. short-term outcomes did not improve over time in type B AD;
5. overall mortality has decreased for type A AD.

An important topic not thoroughly explored by IRAD yet is the role of endovascular therapies in uncomplicated type B AD. Thoracic endovascular aortic repair (TEVAR) has been associated with better mid-term survival and lower risk of aortic-related death in the follow-up of patients treated for uncomplicated type B AD when compared with medical therapy [8]; however, the GRADE certainty for this evidence is considered low and IRAD may contribute in the future to this field.

Another important subject on which IRAD may help shed some light in the future is the comparison between valve-sparing aortic root replacement (VSARR) and composite aortic valve graft replacement (CAVGR) in the context of type A AD. Differently from the context of aortic root aneurysm in which VSARR has been associated with better long-term survival and lower risk of reoperation [9], VSARR has not been found to improve survival over time and it has been associated with higher risk of reoperations in patients with acute type A AD in the long run [10].

A final word of caution about the study by Trimarchi et al. [7]: the authors ranked the IRAD studies according to their citations per year to identify the most impactful topics and this criterion may not be the best option to measure impact.

REFERENCES


