

Editorial

Clinical databases – a double-edged sword!

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To make progress it is absolutely necessary to know what we do in order to define when and how to do it best. This is not specific to our fields of interest, i.e. thoracic, cardiac, and vascular surgery, but much more a general issue. As a matter of fact, it is of prime importance to document the status quo, prior to any change, so that the improvement looked for can be assessed, and compared in its proper context. Monitoring our activities also allows for detecting changes in recruitment, severity of disease, the burden of risk factors, the early operative results, the resources used, and the long-term outcome.

For an individual surgeon, it is not sufficient to know his own results. He has to be able to compare them to the results of his group, to the results of other groups in his area, to the results in other countries, and to the results of competing techniques. The latter is a very important issue and can easily be demonstrated, at least for the short term. Even if a surgeon has excellent results with open repair of descending thoracic aortic aneurysms like zero mortality and zero paraplegia, there can be little doubt that endovascular aneurysm repair is less invasive (no thoracotomy), can be realized in local anaesthesia without the pump oxygenator and other adjuncts, without intensive care unit in many cases, and a shorter hospital stay [1]. The difference between the open and the endovascular approach is so self-speaking [2,3], that post-traumatic aortic ruptures are now routinely addressed with endovascular techniques in many centres, and this despite the fact that, to the best of this author's knowledge, no double blind randomized trial with sufficient power has been published.

However, the most powerful factor speaking in favour of endovascular repair is patient's preference: nobody wants to have his chest split in two if almost similar results can be realized without opening it. The surgeons had to learn this the hard way, with the increasingly popular interventional treatment of coronary artery disease, where the less invasive initial approach with percutaneous angioplasty and stenting with proven need for re-intervention is put in the balance against the repeatedly proven superior long-term outcome of arterial revascularization [4–6]. Even if many surgical centres have been able to keep their volume relatively stable, invasive cardiology has grown continuously over the years and consistently increased its market share.

It has to be remembered here that the next battle is just around the corner. It is the trans-catheter (aortic) valve replacement in trans-femoral versus trans-apical [7,8] or trans-subclavian fashion [9]. There can be no doubt that it is of prime importance to get involved in this field early on. As mentioned above, for surgeons doing endovascular aneurysm repair, reaching from the groin right into the aortic arch, having guide wires parked in the left ventricle with the stiffer part of the wire in the ascending aorta in order to get the covered stent graft into the horizontal part of the arch [10], the aortic valve has already been crossed. Obviously, the main issue here is less about how to do it and what the outcome is, but much more about *who* does it.

Considering the context outlined above, the publications in this issue about a European Thoracic Database [11], a Surgeon Performance Index [12,13], and Risk Prediction in Coronary Surgery [14,15] are both welcome and worrisome. Although it is good to know what works best, it is good to remember that the lesser best may be rightly or wrongly used in various fashions, and wanted or unwanted harm can provoke consequences of unpredictable dimensions.

This brings up another point which is the illusion of so-called anonymized information in databases. For those interested in the field no such thing exists, and databases are just like an open book. This is due to the fact that many numbers speak for themselves, because everybody knows who has the largest series overall, and who has the largest series for specific procedures [8]. It is also known who has the smallest program, the first case, a specific pattern of procedures, clinical pathways, referral, and, last but not least, outcome.

As a result, the set-up of clinical databases, registries, and data pools becomes a major issue in order to prevent, for example, unauthorized use of non-validated data out of context. As an illustration can be cited the new data about hospital performance that were made available just one day ago in Zurich, Switzerland

(http://www.nzz.ch/nachrichten/zueroich/der_messerscharfe_spitalvergleich_bleibt_eine_illusion_1.2233746.html)

showing a mortality rate after re-infarction of 50% in one hospital, indeed, a worrisome finding, certainly bad enough for headlines if required. However, further analysis revealed that in this institution there had been only two such cases,

and that the deceased patient was 93 years old: obviously, a fatal event for that patient and sad for his family, but well within the life expectancy for elderly patients with coronary artery disease.

The wisdom of Socrates (Greece 469 BC–399 BC) may be remembered here for database and similar reports. His three filter test was about checking whether news was true, good, and useful? Reports, being neither true, nor good, nor useful, were not welcome for Socrates, and this has not really changed since!

Read on pages 751–773 [11–15]

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