Quo vadis Swiss report on interventional cardiology?

Position of the Swiss Working Group of Interventional Cardiology and Acute Coronary Syndrome on the Swiss registry of invasive procedures

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Without wishing to encroach on the editorials [1, 2] that have accompanied the annual reports on interventional cardiology activities in Switzerland in the last two years and in the face of growing and justified criticism on the objectives of a registry started more than 20 years ago [3], we would like to take stock of the current debate and illustrate the expected changes and future goals of this epidemiological tool which we believe to be of fundamental medical importance and of great public utility.

There is no doubt that since the first publication of these data [3] and up until now, the rules of the game are still those defined at the outset: the methods of data collection are left to the discretion of each individual centre (manual data recording versus electronic database versus information technology) which leads to significant differences in data-control and data-quality between different centres. This obviously means that a significant amount of this information is of purely indicative value, providing us with just some ideas of the nationwide trend of interventional treatment modalities, but otherwise being of limited use. Here are some eloquent and paradigmatic examples:

– The patient outcome is determined retrospectively on the basis of three arbitrarily defined parameters (death, emergency bypass and peri-procedural infarction). The absence of a uniform definition and a prospective collection of these parameters means that the information obtained, which is essential for monitoring the quality of individual institutions, can at most serve as a self-referential tool for mutually competing centres.
– Due to the lack of rigorous and standardised collection rules, the number and the classification of acute coronary syndrome (ACS) patients/procedures can only be estimated in a more or less reliable percentage of the total number of interventions (20% this year)

The impression, therefore, is that apart from the willingness and methods of reporting of individual centres (extremely variable, moreover) and despite the excellent work in recent years of M. Maeder, thanks to whom the collection and publication of data take place within extremely reasonable time frames [4], the registry itself has reached its natural limit beyond which it is unlikely to progress and improve. Numerous renovations and modernisations (new drugs, new coronary procedures, new structural interventions) have certainly made the house of interventional cardiology more comfortable, but the masonry remains the same. Hence the consideration, which we would like to propose for debate at various levels, of what is most reasonable and appropriate to do in the future? Whether to continue the process of steady and constant expansion of the "Swiss interventional data" programme or whether to seek means and resources to start a new project which must necessarily rely on the support of all Swiss invasive centres. The question is very delicate and must take account of numerous medical, political and strategic aspects.

Before going into detail on this issue, we would like to explore certain aspects concerning the usefulness/function of a registry such as that in question.

In his clear editorial "Zahlenmystik rund ums Herz – und was daraus zu lernen wäre» [2], Thomas Lüscher clearly explains the change which has taken place over the years in the use of the invasive data registry. Initially conceived by Andreas Grüntzig as a tool for monitoring an experimental procedure [5], it was subsequently transformed, as a result of the strong and farsighted pressure of Bernhard Meier, into an indicator of an exponentially growing medical activity. Thanks to this data collection it is still possible to follow and

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closely monitor the evolution of the invasive market in its various areas of application.

Starting from the late nineties, the growing number of centres (in 10 years it has grown from 26 to 32) on the one hand and the extension of invasive procedures, primarily with the introduction of primary angioplasty, on the other, have nevertheless rendered an extension of the initial philosophy necessary. In addition to the quantity, progressive and justified interest on the quality of data has emerged over the last years. In other words, the global concept of quality of care and how to monitor it has been introduced.

Thus, in addition to performing procedures, it should be of primary interest for each centre to be aware of the quality of their interventional procedures/treatments. Here the issue evidently becomes much more complicated since data collection aimed at rigorous quality control requires a precise categorisation of diagnoses as well as rigorous monitoring of the corresponding outcome, defined on a common basis. Clearly this effort, which would have implied a profound revision of certain data collection/reporting procedures, could not be completed neither at a national nor at an institutional level. A significant contribution in this regard has been provided by the Swiss infarction registry, AMIS Plus, which for more than ten years has been rigorously monitoring data on acute coronary syndromes of participating centres [6].

The latest evolution, and undoubtedly the most complex and expensive, is the transformation of essentially "voluntary" registries into systematic and long-term data collection protocols for certain procedures, as for example in the area of valvular interventions. As a result of the cooperation of our working group with promoter hospitals, two new nationwide registries have been established in Switzerland and have been operational for a few months: the Swiss multidisciplinary registry on Aortic Revalving (Swiss TAVI Registry) and the registry on interventional procedures for percutaneous repair of the mitral valve (MitraSwiss). There are two main reasons that have justified the creation of these registries: on the one hand the need to create local medical evidence in new treatment modalities which are still quite controversial, and on the other hand, the increasing (and understandable) pressure from insurance and political partners who, in the presence of invasive procedures clearly more expensive than those normally used, require strict control of each individual procedure in order to be able to justify their needs and ensure financial coverage. There is no doubt that with the introduction of the DRG system, which will regulate hospital financing according to new parameters (depending on diagnosis, its severity and a complex coding of treatment options), the recognition and reimbursement of certain procedures will depend on the ability to document the medical evidence in various clinical contexts.

Having made these considerations, what could be the feasible practical steps necessary in order to adapt the Swiss registry on percutaneous procedures to current and future needs?

A new contemporary registry should include the following minimal requirements: an electronic central database with the possibility of anonymous data entry and a clear definition of the variables to be included. However, since neither the financial nor the personal resources are currently available in most of the centres, it does not seem realistic to establish such a registry as of today.

On the other hand we believe that it is crucial for our image and credibility in the eyes of an increasingly hostile and suspicious political-insurance world, to ask all centres to make a major effort to improve and standardise the existing collection of data on percutaneous procedures.

These are our proposals, which are officially shared and supported by the Swiss cardiology society.

– Creation of local, long-term registries on peri- and post-procedural complications with annual reporting to the working group.
– Standardisation of mortality data, defined as periprocedural and in-hospital mortality.
– Participation of all centres performing primary PCI in the Swiss infarction registry AMIS Plus.
– Publication of data of interventional procedures on the website of the Working Group (www.ptca.ch).

These measures would already represent a significant step forward towards the necessary and inevitable standardisation in the collection/reporting of data on interventional procedures.

In the meantime, there will be enough time to proceed with the creation of a computerised, long-term database "made in Switzerland", an ambitious as well as expensive project which, however, should definitely contribute to solve the longstanding issue of the data-quality of invasive procedures.

In conclusion, we believe it is important, and in the very interests of our corporation, to develop a shared and shareable national awareness in order to protect the ambitions of the major centres while defending the interests of the smaller ones.

References

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