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LETTER TO THE EDITOR

Spanish arthroplasty register[☆]



El registro español de artroplastias

Orthopedic surgery has come a long way from its beginnings as a branch of general surgery to its current status as a well-defined and recognized scientific discipline. One of the most important milestones to highlight during its development was joining the world of Scientific Evidence; analyzing and using the extensive written evidence available in the light of quality criteria and scientific certainty, and maintaining large databases on entities and populations of interest: Registers. The purpose of Registers is to improve the development and application of joint replacements. Although they initially focused on hip replacements, they subsequently included knee, ankle and upper limb prostheses. In the Swedish Register,¹ patients who have undergone surgery for a hip replacement fill a form and are subsequently assessed after 1, 6 and 10 years.

Since the Nordic countries – well-structured in the social and healthcare aspects – began maintaining them in the 70s, other Registers have been created in several developed countries to gather clinical data and study it with statistical tools, in order to extract general conclusions for the optimization of the specific situations addressed. Despite not representing the absolute truth, which Scientific Evidence does not provide either, they come close to being a rational treatment of clinical scenarios and their possible problems and solutions.

After the results of the national Swedish arthroplasty Register were published, and especially once the Scandinavian Arthroplasty Register was established, many countries have attempted to follow their example. However, it has not always been possible as, occasionally, resistance has been encountered from political, social and healthcare collectives. The Swedish Register is the oldest Register of arthroplasties, as it was started in 1979 and comprises over 205,000 primary hip replacements and 12,500 revisions. It identifies risk factors and surgical techniques and gathers over 95% of primary surgeries and revisions performed in Sweden between 1966 and 1995.^{2,3} In 1999, also in Sweden,

the Register of shoulder and elbow prostheses was started by the shoulder and elbow sections of the Swedish Orthopedic Association.⁴

The Nordic Arthroplasty Register Association (NARA) was created in 2007 to act as a common database for Denmark, Norway and Sweden, which Finland later joined in 2010. The first study which emerged from this database included 280,201 hip prostheses and the second 151,814 knee prostheses.⁵ The European Arthroplasty Register (EAR), an EFORT project, seeks to improve cooperation within a network of national Registers. Although Registers are usually based on the Scandinavian model, they are also adapted to national idiosyncrasies. Furthermore, making them comparable requires a homogenization process. However, supranational registers can never replace national data.⁶ It is becoming increasingly necessary to find common criteria to complete forms in order to ensure that the correct statistical information is collected.^{7–10} Most Registers are managed under the auspices of scientific societies of orthopedic surgery and traumatology and, in some cases, of government agencies.⁸

The great advantage of Registers is that they manage to gather a large amount of data in a relatively short time, since the collection of this information can be generalized to the target population throughout the country. Moreover, this means that any studies conducted with that data will generally have sufficient statistical significance to validate their conclusions. This can help to detect circumstances and factors which compromise the results within a short period of time, making it possible to devise and recommend courses of action to avoid undesirable effects. This is of great interest when compared to the time and material means required to investigate such issues through clinical studies, like randomized trials, which are much more complex to design and carry out, as well as more expensive.

Today, we have gained considerable experience in the use of these tools, allowing us to critically judge them and attempt to modify and improve their operability and also reduce their shortcomings and deficiencies, such as the specific statistical treatment applied, what to consider as an endpoint in the survival of the arthroplasty, possible biases due to the specific characteristics of each Register, difficulties to extrapolate data between different environments and countries, etc.

However, beyond the complexity of analysis and interpretation, there are other difficulties when it comes to using data. The most obvious is how to ensure that a universal

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representation is being obtained by the collective of orthopedic surgeons who are, therefore, the first and foremost interested parties in knowing what we are doing for the benefit of our patients. Thus, despite all the potential drawbacks, the advantages of Registers are undeniable and, today, these entities are gaining importance. It is essential to be self-critical and to learn from experience, but also from evidence with statistical and scientific significance, and, in short, to have a method of quality control for arthroplasties performed in our country, which will allow us to compare our results with those of other scientific communities.

And what about Spain? Is Spain different? Of course not. Just like orthopedic surgeons have incorporated the latest advances and standards our discipline, improved the quality of the work presented and published, and increased reliability in fulfilling requirements, likewise, Spanish orthopedic surgery is bound to establish and maintain an Arthroplasty Register.

Now is the time. Concern over this issue has permeated the field and SECOT has responded to that interest. We are standing at the threshold and fully prepared to create a Spanish Arthroplasty Register. It has already been mentioned before: it does not represent the absolute truth, but it promotes scientific and operational knowledge, supports the need for changes in clinical approaches or lack thereof, facilitates their optimization and improves a feature that can be critical nowadays: the cost effectiveness of medical procedures. Our profession has a particular interest in this project, always bearing in mind the fact that this interest is motivated by the improvement of healthcare conditions and quality of life for our patients, as well as the service and performance that we are required to provide to our society.

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