The teaching of Orthopedics in medical schools in Brazil

Concerns regarding the teaching of medicine at undergraduate level have been the topic of many debates within academic settings. In relative terms, undergraduate medicine has been neglected by disciplines within clinical medicine, while training at levels of great specialization suitable for residents has been favored.

From a pedagogical point of view, it is not easy to pinpoint exactly what students should learn within each field.

No special care is taken by lecturers in preparing classes aimed towards the needs of generalist physicians. Classes given at undergraduate level are generally the same as those given to residents, with obvious disinterest among the undergraduate audience. These classes, or even the discussions on clinical cases, go deeply into topics that are aimed towards training specialists and not undergraduate students.

In Orthopedics and Traumatology, these points can be seen much more clearly, given that almost everything is aimed towards broad-based postgraduate programs, both within continuing education and within training for residents.

Excellence achieved in training orthopedists is shown by excellence in the final assessment examination, which is considered to be a reference standard among all medical specialties.

Nonetheless, this further deepens the abyss that exists between broad-based postgraduate programs and undergraduate teaching within Orthopedics. With rare exceptions, the latter is practically nonexistent today in Brazil.

In an evaluation that we made recently, more than half of the 178 Brazilian medical schools showed very little presence of orthopedics within their teaching schedules. It appeared only within surgery as discussions on cases presented as problem-based learning (PBL). Given that the precariousness of medical education that afflicts Brazil is inversely proportional to the growing number of new schools, this situation needs to be reversed.

The situation is as if Orthopedics and Traumatology were considered to be only a specialty at postgraduate level, and as if it were unnecessary for training physicians.

However, if we were to use the basis of an epidemiological point of view to draw up a teaching curriculum appropriate for Brazilian realities, it can be seen that 60% of admissions at walk-in clinics are patients with musculoskeletal injuries. There is a consensus based on these statistical data that medical students who are about to graduate should be in a position to act at secondary level within orthopedics, with emphasis on multiple injuries, even if these students do not intend to practice this specialty.
It is inadmissible that internees can resuscitate a patient with cardiac arrest or control a patient in a diabetic coma, but has not had training on how to proceed when faced with a patient with an exposed fracture, given that such situations occur equally often at walk-in clinics.

However, many medical schools do not have a walk-in clinic with a daily volume of multiple-injury patients that would allow students to gain good practical training.

All this is without mentioning the outpatients for whom early diagnosis of orthopedic conditions is of fundamental importance for achieving a better prognosis, such as cases of congenital deformities and developmental deformities of the musculoskeletal system.

The nature of the undergraduate Orthopedics course, when it exists, is merely informative and does not have training value. The various diseases are shown superficially, without students having any involvement with or responsibility for patients, even if hospitalized. Knowledge-based and specific skills-based training for physicians who practice orthopedics is currently restricted to orthopedics residents.

It will not be easy to turn this disheartening situation around. There are obstacles to structural modifications to the medical curriculum within the undergraduate committees, the congregation, the teaching staff and even the Ministry of Education.

Unfortunately, professors of orthopedics do not have any active presence in these collegiate bodies, since they are much more concerned with training residents than with training undergraduates.

Some schools do not even have a titular professor of orthopedics who might be able to participate in and influence these changes. Few titular professors of orthopedics have achieved their positions through public competition and thus would have the pedagogical and didactic foundations to modify this situation within a university congregation.

We need to make the few titular professors of orthopedics that exist in Brazil aware of the need to establish a new generation of orthopedists with master’s and doctoral degrees who have real dedication to undergraduate teaching, with research projects in which scientific initiation students can be included.

The key to restructuring Orthopedics courses is precisely to provide motivation for students at an early stage, through involving them in clinical, epidemiological and experimental studies. This will give them a solid background based on their participation in original papers that will move teaching forward and progressively increase our space within the core undergraduate curriculum.

The creation of optional disciplines also has an important role within this context, since these will attract students towards new fields of activity. The breadth of options within our specialty makes it possible for us to motivate them towards new fields, such as sports traumatology, reconstructive microsurgery, orthopedic geriatrics and others.

Drawing up of a single national program for teaching Orthopedics and Traumatology, publication of an instructional book aimed at students, installation of a portal exclusively for undergraduates on the website of the Brazilian Society of Orthopedics and Traumatology (SBOT) and continual monitoring of all medical schools to verify the status of the teaching of our specialty are among the measures that need to be taken urgently.

Well-structured teaching of Orthopedics at undergraduate level is the fundamental basis for us to be able to establish our specialty within the academic world and consequently within society, as one of the specialties with greatest participation in the final common objective, i.e. improvement of healthcare within Brazil.

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