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Its the anesthesiologists who are the best ones to run an ICU: against

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ABSTRACT

Historically the contribution of anesthesiology is undeniable, however, often related perioperative practical skills are not the only components of intensive care. Today, the skills of a trained intensivist have enormous diversity. Actually too big to be owned by a classic specialty, whatever. Intensive medicine has become a unique, complex multidisciplinary profession with different backgrounds transcending a host of other specialties. Anesthesiology could be a leader in some contexts, however, seems to be a leadership to be regained, in other scenarios, intensive medicine is already hopelessly individualized, and stands out. Considering the heterogeneous development and policies around the world, currently no other specialty is in a position to consider itself naturally competent to assume the responsibility of conducting an ICU.

Key words: Anesthesiology; Care unit, Intensive; Care, Intensive

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The poliomyelitis epidemic in Copenhagen in 1952 was an early milestone in the creation of the current intensive care units. Bjorn Ibsen (1915-2007), an anesthesiologist, noted that the negative pressure respirator commonly used at that time was unable to provide adequate ventilation to the patients' lungs. Ibsen then administered intermittent positive pressure ventilation with the aid of a manual ventilation bag attached to an endotracheal tube with a cuff or tracheostomy cannula. Early it was observed that this conduct associated with physiotherapy under blood gas control would reduce mortality. Manual ventilation of patients was performed by teams of medical students who took turns and allowed the survival of several patients. Subsequently, it was also applied in patients with drug overdoses, tetanus and chest trauma with improvement in survival. It was the embryo of the ICU that arose largely as a consequence of the anesthesiologist's experience in artificial ventilation and in the application of equipment and techniques for purposes other than the administration of anesthetics. Epidemics and other catastrophes of the last century have reinforced the idea of keeping severely ill patients together in one place.[1,2]

In the early days of intensive medicine, the main objectives were to treat the complications resulting from the primary disease: to maintain breathing and circulation. Specialists in internal medicine, nephrology, infectious diseases, neurology and others were routinely needed, each covering their own area of expertise.[2]

Anesthesiologists have not always been in leadership. In many cases, hospitals wanted more than one unit and formed a group of intensive care units, each specializing in different surgical and medical disciplines. This modality had disadvantages. Patient care was fragmented, causing management difficulties. Specialized intensive care units were well developed in their field of interest. However, when patients developed problems outside that area of expertise, they were not adequately treated.[2]

The discussion on the subject passes through the formation of the intensivist. Currently, despite the recognition of the broad mix of skills required, over

the decades, the evolution of intensive medicine training programs has remained highly variable, often fragmented and unable to provide a uniform combination of skills and competencies.

Australia was a pioneer in establishing formal qualifications for intensivists, and the Australian Faculty of Anaesthesists organized the first examination for intensivists in 1979. In the USA and many European countries, several surgical and medical specialties as well as anesthesiology have developed their own training programs resulting in intensive care subspecialties within a major specialty. In the Nordic countries and in Italy, intensive medicine has developed as a natural extension of anesthesiology.[3]

Intensive medicine was established as a primary specialty in Spain and Switzerland. In 10 countries of the European Union, intensive medicine can be practiced as a specific qualification with a common training program for specialists with certification in several basic disciplines (anesthesiology, cardiac surgery, cardiology, internal medicine, neurology, neurosurgery, pediatrics, respiratory medicine and surgery). A specific qualification is an area of specialization as well as a major specialty qualification in which extra specialization is required outside the mainstream field to provide high quality patient care. In the remaining 17 countries of the European Union and the other two countries in the economic area, intensive medicine is part of the anesthesiology training program, among others, with different training periods ranging from 6 to 24 months. The training program for anesthesiology also varies from 36 to 72 months in these countries.[4]

The United Kingdom is a pioneer in Europe in the development of competency-based training in intensive care medicine with access to various basic skills. This approach emphasizes skills and competencies, not just knowledge.[3,5]

Competency-based training has been supported by the European Union, and the European Society of Intensive Care Medicine has played a leading role in its development. In this case, the duration of the training depends on the individual time spent on the achievement of each specific competency. The CoBaTrICE (International Competency Based Training Program in Intensive Care Medicine in Europe) focused on writing a competency-based training program to set the minimum standard of knowledge, skills and attitudes. This standard includes resuscitation, diagnosis, disease management, interventions, procedures, perioperative care, comfort and recovery, end of life, pediatric care, patient transportation, safety, management and professionalism.[6,7]

Anesthesiology includes anesthesia, perioperative care, intensive care medicine, emergency medicine and pain therapy, and is recognized as one of the leading medical specialties in the treatment of patient safety issues.[8] Because of its history and singularities, anesthesiology is the specialty most often linked to intensive medicine.[9,10]

The contribution of anesthesiology is undeniable, however, often related perioperative practical skills are not the only components of intensive care. Today, the skills of a trained intensivist have enormous diversity. In fact too big to be owned by a classic specialty, whatever.

The days have passed, and a good intubation ability has not long been a good anesthesiologist, nor a good intensivist. The competence needed to cope with the critical conditions gradually changed and different skills, apparently belonging to other specialties, became crucial in the practice of intensive medicine.[11] Although intensivists may have a different specialty or specific field of interest, they should have broad knowledge of the skills needed to treat the patient as a whole, and these have increased dramatically in recent years. Intensivists routinely perform hemofiltration, ultrasound, ECMO, bronchoscopy, parenteral nutrition, antibiotic therapy and many other complex treatments in their daily practice.

Anesthesiologists-intensivists are in small numbers, as is the case in the USA. In 2001 less than 4% of the 25,000 board-certified anesthesiologists have the Certificate of Special Competence in Critical Care. Of the 7,800 members of the Society of Critical Care Medicine, approximately 35% are internists, 25% are surgeons, and only 12% are anesthesiologists.[12] Of the 56,345 physicians certified in anesthesiology in 2016, only 2,153 (3.8%) are also diplomates in critical care medicine.[13,14]

According to some authors intensive medicine in the USA suffers from a complex identity crisis. To begin with, physicians of other specialties tend to be ambiguous about the role of intensivists, and the general population is not aware of their duties. In contrast to traditional specialties such as cardiology or gastroenterology where responsibilities are generally known to the lay public, or in contrast to newly developed specialties such as emergency medicine, the enigmatic roles of an intensivist may differ depending on a primary specialty, the patient population or even between ICUs within the same

hospital.[15]

The obstacles of primary intensive medicine are many. The standardization of education, accreditation, current educational arrangement of the various specialties (anesthesiology, internal medicine, surgery, pediatrics), each offering training and certification of intensive care of distinct subspecialties, is deeply rooted in interdisciplinary policies. A comprehensive pattern of intensive care training and accreditation is essential for 21st century medicine and would be a long way to the development of primary intensive care. Another important obstacle is the lack of intensivists. There are many reasons why physicians do not opt for intensive care such as a career path, non-direct training path, the nature of intensive care that affects lifestyle issues, bornout, and low medical compensation.[16,17]

A paradigm almost always requires time, land, and resources. But it would eliminate a specialty identity crisis, and ultimately improve patient care.[15]

Taking the American example, anesthesiology could be a leader in some contexts, nevertheless, seems to be a leadership to regain, in other scenarios, an intensive medicine is already irretrievably individualized, and stands out.

In Brazil, as of 2018, intensive medicine education programs will exclusively adopt the direct access model with four years of training. Until then, some specialties, including anesthesiology, were accepted as a prerequisite.[18] The new model is the trend of most Latin American countries.

Intensivists should exercise their own leadership to coordinate all the professional health roles that work around the critical patient, being a reference and also an interface between the patient and other specialists when the skills of a single professional are insufficient. Their intensive medicine training can be built on other specialties such as anesthesiology, as is often the case in Europe. The organization of ICUs is different in many countries, and political and administrative measures need to be taken to create an ideal workplace to care for critical patients regardless of training, primary or not, sub or superspeciality.

In fact, some studies have shown that there is no significant difference in mortality among patients managed by intensive care workers with basic training in internal medicine and those managed by intensivists with training in other specialties.[19,20]

Today, modern intensive care has the responsibility of making decisions and specially trained doctors. More and more intensive care units are becoming independent medical departments in the organization, with budget and personnel allocated, committed only with intensive medicine.

Intensive medicine has become a unique, complex multidisciplinary profession with different backgrounds transcending a number of other specialties.[4] Considering heterogeneous development and policies around the world, no other specialty is currently in a position to consider itself "naturally competent" to assume the responsibility of conducting an ICU. Most important in any individual specialty is the high level of skills to optimize the diagnostic and therapeutic approach as well as to improve the outcome of patients and their quality of life after hospital discharge.

Conflict of interest: Nill

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