Editorial

To become a better Anesthesiologist

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As doctors we can be better, but we will never be perfect.

All doctors -almost all of us-, want to be the best physician in our work location, beyond the limits of the hospital, the town, the city, and occasionally, some of us aspire to be almost perfect, like one of those superheroes who always have the right solution for all type of problems. This dream, this desire, a vision or attitude is valid in other areas of human knowledge where quasi-perfection is possible as long as it is a matter of exact sciences; disciplines such as physicists, mathematicians, engineers, architects, astronauts, biochemists and other similar fields.

As doctors we must practice an inexact science, a profession where there are different ways to prevent diseases, to diagnose and cure a person, an activity where sometimes opposing criteria are correct, and in thousands of situations what was correct yesterday, today could be a serious mistake. It would be a hallucination to wish to be perfect in a profession like ours. Although evidence-based medicine is the most correct way to practice our profession,[1-4] this evidence should not always be accepted as it was published, but these concepts must be translated into medical practice and be able to determine treatment options for specific cases based on the best research, the characteristics and preferences of the patient, as well as the availability of resources in the work area. A well-chosen medical plan requires active effort to minimize the possibility of errors and potential damage to our patients.[5,6]

In recent decades, anesthesiology has advanced exponentially. Little remains of its obscure beginnings and today it is one of the most reliable specialties, with frequent dynamic modifications; Technology of monitors, anesthesia machines, innovative equipment for tracheal intubation and regional anesthesia, the novel drugs used in the perioperative period, as well as the various applications of artificial intelligence have brought us closer to the ideal goal of safer practice,[7,8] which has considerably decreased the risks of undergoing surgery under any type of anesthesia. Nevertheless, we are still far from the utopian goal of zero errors, zero complications.

Up-to-date knowledge, technical skills, empathy, and experience are mandatory qualities in an excellent physician. Can I do more than just be very good at our usual career of being anesthesiologist? Have I reached my professional goal? Am I on the right path to excellence? Should I change the way I perform anesthesia? These are just some of the questions we frequently ask ourselves throughout our professional lives.

There are several ways that could help us to become better anesthesiologists. Without pretending to tell you how to be safer, I'm going to discuss some of these routes.

Enjoy your profession. Being an anesthesiologist is a professional pleasure that is difficult to describe.[9-11] Even though we work "*behind the scenes*" our duty is to maintain the life of each of our patients so that at the end of their hospital stay they can return home, to work, to their family and friends to continue their life. This is easy to say, however; it is increasingly more elaborate to establish the best anesthetic management plan, a correct treatment, without errors or sequelae. An empathetic perioperative approach, without anxiety or doubts for patients and their loved ones, duly updated, in a safe medical environment that guarantees the aspirations not only of the patient, but of the entire surgical team.

There is no accurate scale that measures the satisfaction of being a good anesthesiologist, a measure that reflects our personal and professional success, or what are the best factors that guide us along this path of life that we have chosen as the ideal way to work. Just let yourself be guided by your academic and human goals to be better every time you see one of your patients.

Avoiding mistakes or erring on the safe side. Medical errors are considered to be failures in health care that may or may not result in temporary or permanent harm to the patients, their family, the medical team, the healthcare system, and the community. These faults have been recognized as a serious public health problem, reported as the third leading cause of death in the US.[12] The death of a patient in the operating room is an unfortunate event that generates serious deleterious effects on the family and the participating medical team. Most deaths in the operating room are related to the pathologies that originated the need for surgery, although unfortunately there are situations that result from poor anesthetic management that could end in serious results. Bonnet et al.[13] found 26 indicators linked to severe morbidity related to anesthesia; acute heart failure, cardiogenic shock, acute respiratory distress syndrome, pulmonary embolism and thrombosis, bronchospasm or laryngospasm, pneumonia, inhalation pneumonitis, pneumothorax, difficult or impossible intubation, atelectasis, autoextubation or accidental extubation, sepsis or septic shock, ischemic attack, postoperative confusion or delirium, post-puncture headache, medication error, liver failure, unplanned admission to the intensive care unit, and multi-organ failure. When the cause of death is the result of an error or adverse reaction to anesthesia, it can happen almost immediately or late due to factors related to complicated anesthesiological management.

Unintentional failures are still frequent in anesthesiology, and of these, errors related to the drugs we use in the perioperative period are the most frequent and expensive.[14-16] Fortunately, most of these

mistakes can be considered on the safe side of our fault. Adherence to the various properly updated guidelines for the safe administration of anesthesia is the surest way to reduce errors. Although all the guidelines are based on clinical studies, research protocols, reviews, expert advice, clinical experiences, they are only recommendations that we must adopt and adapt to each patient, to each workplace and to the experience of each anesthesiologist. When we make a mistake, it is correct to report it, discuss it, and overcome it through open conversation with those affected, colleagues and hospital authorities. This attitude minimizes the risk of a lawsuit and helps us to prevent second victim syndrome.[17,18]

As health professionals, we must be familiar with the different types of anesthesia errors in order to better understand the adverse events that can cause harm. It is mandatory to identify the factors that led us to make an error, develop corrective measures that reduce the risks and decrease the possibility of making mistakes. In medicine, routines are acceptable if we adapt them to the scientific and technological advances of each specialty. Even though to err is human; making mistakes in anesthesia is dangerous, unavoidable, and frequently generates a permanent catastrophe.

Updating. It is required to keep ourselves updated in all aspects of anesthesiology and related sciences regardless of our subspecialty. Nowadays, information is available on the Internet for free or at low costs. Reading is the best way to keep us up to date. Alternatively, we can attend continuing education courses, congresses, learn and practice new techniques, medical meetings of our interest or in related areas such as internal medicine, pharmacology, radiology, surgery, pulmonology, cardiology, neurology, etcetera. Acquiring recent information on topics that are not of our primary interest broadens our horizons and skills, which will definitely make us better anesthesiologists. Anesthesiology, like no other specialty, requires a thorough knowledge of pharmacology, biochemistry and physiology. Become an expert in these subjects, without forgetting the importance of airway anatomy and central and peripheral neuroanatomy.

Updating in anesthesiology is a process that facilitates maintaining our certification current, a determining factor in reducing errors.[1]

Become a respectable educator. Another way to become a better anesthesiologist is by dedicating time to teaching, research, and/or publishing your experience, your ideas about our specialty. From my epoch as a medical student -back in 1966- I had the opportunity to be an instructor in the human histology laboratory at the Universidad Nacional Autónoma de México School of Medicine. In fact, Ham's text on this subject has been the only book I have well-read from the first to the last page. That is how my love to be an educator was born. From histology instructor to anesthesia professor, from associate researcher at Institutos Nacionales de Salud to Editor in Chief of JACCOA, I have dedicated much of my time to be a professor. This has forced me to study more than my students, since teaching requires being the best in the classroom, in the operating room, ICU and recovery area.

Nowadays, residents obtain information more easily; what we used to look for in the hospital library is now on a smartphone, a laptop or sent to them via WhatsApp from a remote location.[19-21] Being a director, professor, assistant, researcher, reviewer or editor in anesthesiology requires revamping the educational systems, facilitating teaching at all levels, from the medical student to the moment of retirement.

It is not at all necessary to work at a large university, in a renowned institute or a prestigious hospital to dedicate time to teaching. You can form a teaching-learning circle with your colleagues, friends and even strangers in nearby or distant places using social networks for academic purposes, from a distribution list to a WhatsApp group. There are also multiple websites on the Internet that are dedicated to this type of free, high-quality teaching. As anesthesiologists, it is easy for us to teach colleagues from other specialties the appropriate management of the airway, pulmonary ventilation, subarachnoid puncture, difficult venous access, cardiopulmonary resuscitation, physiology and pharmacology.[22,23]

If you have not yet had the need to be a mentor, I suggest you try it and suddenly you will be a better anesthesiologist, a better person.

Look for excellence. Currently, total excellence in medicine is an unattainable goal due to the growing accumulation of innovations, so we must worry about achieving relative excellence. Being at the top of our profession requires great effort, dedication, study, experience, modesty and empathy; factors that are convenient to be part of our professional routines. An excellent physician is one who is always looking for the best way to practice his/her profession, an attitude that results in abundance, creativity, and makes room for the emergence of outstanding professionals, with new values that promote health, progress, and happiness for his/her patients and himself/herself. On the path to excellence in anesthesiology it is necessary to take into account that knowledge, skills and empathy with patients and our work group are essential factors for the professional care of our patients and their families. Seeking excellence in the daily practice of anesthesiology is mandatory in the route to make a safer management. This is a feasible category for every anesthesiologist who enters and persists on this path that seeks relative excellence.[24-26]

Help the disabled anesthesiologist. As human beings working in a health team, we must be aware of the possibility of developing certain disabilities or limitations for the practice of anesthesiology throughout our professional lives. Among others, two excellent anesthesiologists had physical limitations that did not prevent them from being brilliant: Alon P. Winnie and John J. Bonica, respectively icons of regional anesthesia and chronic pain, had physical limitations that did not stop them from being superb physician and bequeathing their wisdom to us. There are many more anesthesiologists who have also been brilliant minds with disabilities and with the life goal of being mentors; one of them was my professor Gabriel Camacho who developed liver cirrhosis after hepatitis C. He worked in the operating rooms until a few days before he died on my shift in the ICU. He taught us clinical anesthesia and sometimes dozed in the operating room. He always had a resident who supported him with his patients.

Katz[27] considers an ethical obligation to recognize and assist colleagues with disabilities who might interfere with patient care and to attempt, whenever possible and safe, to support colleagues with disabilities in the pursuit of a successful career. Colleagues with burnout, substance abuse disorder, and second victims should also receive comprehensive support to facilitate their prompt return to a safe practice of their profession. Encouraging and accepting physicians with disabilities in their practice of medicine benefits patients, by including physicians who can better understand the challenges of the disabled, and also the profession, by promoting acceptance of diversity in practice.

Always work as a team with surgeons. As an anesthesiologist, it is not always easy to work as a team with surgeons. However, to ensure patient safety, it is mandatory to form a group with all the professionals and technicians in the operating room without trying to impose orders, but always anticipating safety based on scientific evidence. *"Is my patient*" is often argued by surgeons, simply because they made the diagnosis and scheduled the surgery. The truth is that

in the perioperative period, including post-anesthetic recovery, the responsibility lies with each member of the surgical team. The medical-surgical group should avoid the possible opposing hierarchies, and overcome these factors by identifying common values and objectives in the care of our patients and establish the best management plan. It is not a question of imposing criteria, but of exchanging knowledge and experiences that leave obsolete hierarchies forgotten. The patient is no one's property; is everyone's responsibility. Let's be sensible in this doctor-patient relationship and let us create an evidence-based anesthesiologist-surgeon relationship that guarantees the safety of each patient. Patient care is the prerogative of teams rather than of individuals.[28,29]

Participate in altruistic groups. Giving away our anesthesia and pain management services to patients who are cared by groups of unpaid health care workers is a very satisfying way to become not only better people, but also better doctors. Safe care for vulnerable people, whether in clinics, hospitals, community centers, or remote sites without medical resources, requires not only our knowledge and skills, but also providing appropriate supplies. As anesthesiologists, we can provide medications, equipment, consumables such as endotracheal tubes, needles for regional anesthesia, syringes, gloves, dressing materials, and much more.

The humanitarian motivations for medical support, in our case as anesthesiologists, can be provided during natural disasters or man-made catastrophes such as wars, climate-related calamities, human rights abuses, gender-based violence, or extreme poverty. These humanitarian activities are very satisfying and should be part of the training programs for students, residents, as well as for graduate anesthesiologists.[30-32] Free surgery in countries with limited resources is a challenge for more than 5 billion people, a challenge that involves us directly and requires a globalized goal that is still far from being achieved.[33]

Learn something outside of medicine. Finally keep in mind that "*The doctor who only knows medicine, doesn't even know medicine*". It is a well-known expression that is mistakenly attributed to Louis Pasteur, but which is actually from the multifaceted Catalan doctor José de Letamendi y Manjarrés (1828-1897), who was a professor of anatomy at the University of Barcelona, where he obtained his degree, and then of pathology at the Central University of Madrid. Being a doctor is just our modus vivendi, a profession that we chose in our youth for reasons that were unique and different for each of us, and which led us to become specialists in anesthesia and/or in one of its subspecialties. Much has been written about the ignorance of doctors outside the field of our profession.[34-36] Very few colleagues dedicate time to learn the importance of knowing other areas of human knowledge, other activities away from our routine of going every day to and from the hospital. Music, art, painting, sculpture, religion, philosophy, literature, astronomy, carpentry, photography, languages are some fields as attractive and interesting as medicine. In my case, I decided to learn how to make wine; from selecting some varietals, planting the vines, caring for them, harvesting and processing the grapes and bottling my own wine, to then enjoying it in my small vineyard in the company of my family, friends, colleagues, professors and even some patients. Non-medical activities enrich our spirit, make us more empathetic, bring us closer to our environment and are a fundamental vital part of the path to becoming safer doctors, better human beings.

Connecting, contributing and giving back in our profession goes beyond the diplomas and certificates hanging on the office wall. As an anesthesiologist, I want to dream of having the human and academic spirit to always give my best to each of my patients, my students, and my colleagues.

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