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Editorial

Unnecessary surgery☆

La cirugia innecesaria

> ''It is simply unscientific to allege or believe that doctors do not, under existing circumstances, perform unnecessary operations and manufacture and prolong lucrative illnesses.''
> GB Shaw
> ''The Doctor's Dilemma: Preface on Doctors'', 1909
> Editorial Sudamericana, Buenos Aires, 1956, p 10

The proliferation of surgical procedures with debatable outcomes without the full consent of patients, the growing number of legal proceedings for alleged malpractice based on weak surgical indications, and the rise in health care costs have brought to the foreground the implications and consequences of unnecessary surgery.

Although the topic seems to be current, in 1894, William Stokes, former President of the Royal College of Surgeons of Ireland, highlighted concepts of Ethics in Surgery regarding operations that were not very appropriate for the management of oncological pathologies and provided questionable results.[1]

In 1908, Ernest Groves, a British surgeon, promoted the registration of surgical interventions in order to know the number of procedures performed and their results.[2] Meanwhile, in the USA, Wetherill stimulated hospital efficiency, the dissemination of Ethics, and the exclusion of the inept and incompetent from clinical practice.[3] All of these concepts were summarized by Ernest Codman, who emphasized the importance of setting standards as well as the reporting of results.[4] In 1922, Haggard published an editorial article titled ''The Unnecessary Operation''.[5] The threat posed by unnecessary surgery was also addressed by Paul Hawley, Executive Director of the American College of Surgeons, when he stated that, ''the public would be shocked if it knew the amount of unnecessary surgery performed''.[6] A very recent article in the *New York Times* has once again focused on this significant problem,[7] and likewise another article published in *Forbes* magazine.[8]

For many, it is a poorly defined entity, but Leape and Pauly contributed to its conceptualization. Surgery that is useless and ineffective is considered unnecessary surgery. The subjective perspective of patients does not allow for its quantification or evaluation. An unnecessary surgery is one that either does not benefit the patient or provides such minimal benefits that are far outweighed by the costs in terms of risk, morbidity, disability and pain.[9,10] Unnecessary surgery is not evaluated by its results or potential postoperative complications but must instead be analyzed from its evidence-based indication and after an informed decision by the patient, who gives consent.

The interest in this topic is based on the fact that it represents a break in the ethical principles of the patient-surgeon relationship, in which self-interest takes precedence over altruism. Bevan highlighted that the two most serious problems facing Surgery are unnecessary surgeries and procedures performed by incompetent surgeons.[11] Unnecessary surgery is not evaluated based on results, as complications are inherent to any surgical procedure and considering that the global postoperative complication rate can reach 25%.[12]

Crile made a distinction between appropriate and inappropriate procedures, the latter being classified as: a) operations inappropriate for the disease; b) operations inappropriate for a given patient; and c) operations appropriate for the disease and the patient, but performed by a surgeon who has not been adequately trained.[13] In 1974, McCarthy presented before the US Congress the results of the First Second Opinion Program, reporting 17.6% of indications for surgery had not been endorsed or confirmed.[14] Extrapolating his findings to the entire US population, it could be estimated that there were, at that time, about 2.4 million unnecessary operations performed annually, resulting in an approximate cost of $3.9 billion and some 11,900 deaths. The Study on Surgical Services for the United States (SOSSUS)

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defined 6 categories of interventions, which *a priori* and with no prior analysis, could be considered unnecessary[15]:

a) Operations in which pathological tissues are not removed
b) Operations with a questionable surgical indication
c) Operations to relieve tolerable or non-disabling symptoms
d) Operations for asymptomatic or non-threatening disorders
e) Operations considered obsolete, discredited or outdated
f) Operations with little or no justification based on symptoms and/or complementary studies

This report clarifies that each category requires precise and rigorous evaluation of each case under study before judging the degree of need for the intervention.

The literature has shown evidence of this type of practice and has also demonstrated great variation in the rates of certain surgical procedures at the regional, national and international levels. For instance, several clinical trials have shown that spinal fusion surgery for lower back pain has not achieved optimal long-term results compared to less invasive therapies.[16] Knee arthroscopy is a very common operation and does not always achieve the desired results,[17] and the same holds true for arthroscopic partial meniscectomy. The Fidelity study, after comparing the results of arthroscopic partial meniscectomy versus placebo surgery, found no relevant benefits over 12 months of follow-up.[18] Similar conclusions were reported by Marsh in Canada.[19]

Video-assisted colonoscopies performed in patients outside the recommended age range or at shorter intervals than indicated has been reported in 17%–25.7% of cases.[20] The Ischemia study, with the support of the National Heart, Lung and Blood Institute of the USA, demonstrated that invasive treatment does not reduce 4-year mortality in coronary heart disease.[21] Between 2007 and 2015, the proportion of implantable cardioverter-defibrillators that did not meet the Medicare National Coverage (MNC) criteria was 25.8%, which then dropped by more than 15% after the intervention of the US Department of Justice.[22] Flum and Koepsell called attention to the incidence of negative appendectomies, defined as the non-incidental excision of a normal cecal appendix.[23] The management of localized prostate cancer has also been subject to critical analysis, as noted in a study by the US Veterans Administration, with an unjustified increase in radical surgeries.[24]

The rates of use and the eventual overuse or over-indication of certain procedures should be a wake-up call for detailed analysis of the underlying circumstances. One example is the high variation in the performance of cesarean sections.[25,26] The existence of cases with unnecessary surgery should stimulate the development of clinical consensus and evidence-based surgery in order to ultimately reduce useless surgeries to a minimum. Several reasons may justify performing unnecessary procedures, including uncertainty, social factors, responding to pressure from patients to undergo procedures with doubtful results, use and customs, which in part may explain the differences in usage rates and remuneration systems.[27] Payment per service can also encourage this practice in the same way as the overuse of surgical procedures.

Basically, unnecessary surgery arises from three recognized causes: ignorance, incorrect judgment, or dishonesty (which would encompass incompetence, indifference, or immorality). From these three, the ethical and medico-legal implications of a procedure that is not supported or justified by scientific evidence clearly emerge.[28] Monitoring, supervision and auditing systems should be promoting within medical institutions at a general level. Professional associations must advocate for transparent policies and therapeutic decisions based on scientific evidence as well as good clinical practice guidelines, which should be adjusted for each hospital setting.

In this manner, medical associations should promote the ethics of competence in the style proposed by Arnau de Vilanova (1238–1311) and Richard Cabot (1868–1939), while likewise remembering the proposals by Engelbert Dunphy in his presidential speech upon assuming leadership of the American College of Surgeons in 1963: ''Surgeons have a collective responsibility to seek benefits for humanity. The autonomy of the individual surgeon is conditional, since society agrees with surgeons that they will act for the benefit of humanity. Hence the importance of a central authority that ensures compliance with professional standards, which represent the core of Ethics in Surgery''.[29]

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