Background. The increase in life expectancy makes surgery for old people a routine. In addition, a quest to develop technology and guidelines for centenarians is now emerging.

Ethical issues. Surgery cannot be refused neither because of chronological age of the patients nor on economic grounds.

Consensus. Surgeons are requested to make the right choice in the right way by pondering on health related quality of life, by obtaining the help of other professionals, and after having ascertained the integrity of the neurological conditions. Family opinions not legally relevant.

Key words: Surgery, Old age, Centenarians, Health related quality of life, Chronological age, Valid informed consent

INTRODUCTION

“How much a doctor should do for aged patients?”
This question briefly summarize today's medicine main problem and it is a topic full of contradictions regarding legal, scientific, ethical and economic issues.
This work wants to offer some handy to use contents in the current debate and “to mend” professional relationships between experts with a different proficiency.
Performing surgery on centenarians could seem risky, almost irrational. Nevertheless, our considerations will show how this choice could be a result of precise clinical and ethic evaluations.

CLINICAL CONSIDERATIONS

A fundamental question is: how can we define a patient as “aged”? Everyone agrees that biological age is more important than chronological age. It, but for a statistical purpose it is better to define a cut-off point considering the life condition of our society. Even if a worker could be defined as “old” at age of 65/67 (the usual retirement age) a more reliable cut off should be 70 years old.
The increase of life expectancy brings a greater rate of pathologies in aged patients, especially oncological ones. Almost 60% of new cases of cancer are found in people over 65 years old and about 40% is found in people over 70 years old. If we consider rectum cancer, the mean age of the diagnosis is 68,4 years while for colon cancer it is 70,5 years with a progressive increment until the eight decade. In other words, almost
50% of deaths for colorectal cancer are found in people over 75 years old.

Generally, the evaluation process that brings a patient to surgery is not different between an 80-year-old patient and a 50-year-old patient. Indications to surgery should follow these parameters:

- clinical conditions of patients (biological/chronological age, PS, ASA score...);
- chance of successful surgery;
- health-related quality life before and after surgery;
- elective surgery/emergency surgery;
- chance to express a valid informed consent.

However, many factors should be considered in the surgical decisional process on aged patients. Obviously, there is not much to talk if we have a conscious patient in good health with rectus cancer or lower limbs gangrene; but if we have an aged patient with several comorbidities and different problems related to the social context, the decision-making process should take account of ethical and moral aspects.

It is important to consider life quality related to health status of patients: the “health-related quality of life” (HRQOL). In fact, the aim of surgery for aged people should be quality of life as well as survival. All risks of surgery and peri/post-operative complications should be evaluated (e.g., ictus, loss of consciousness) because they could have a catastrophic impact on QOL, with loss of autonomy and further need of assistance after hospital discharge.

Somebody believes that below certain values of quality of life, life is not worth to be lived. So, if there is no chance to get back a good value of HRQOL, surgery should not be proposed. However, as Rhoads said “Life has 100% mortality, death is inevitable”. Today’s medicine should be focused more on QOL instead of survival. All risks of surgery and peri/post-operative complications should be evaluated (e.g., ictus, loss of consciousness) because they could have a catastrophic impact on QOL.

Anyway, even the HRQOL needs to be evaluated with caution: surely, if the surgeon believes that there is a high chance of success, he will promote the surgery, especially in emergency situations; on the contrary, if there are low chances of success and the surgeon wants to abstain from surgery, he must discuss his choice with the patient accurately.

The decision should be made each time in order to look for best benefit for the patient, and we are sure that even in the most complex cases, the experienced surgeon is the most qualified person to make this decision, more than patient family or judges.

In more complex cases, we find useful to stick to these 3 rules:

- perform an evaluation of functional and neurological state of the patient before the acute event;
- use a multidisciplinary approach, sharing responsibility with other professionals such as geriatrist, psychiatrist, gastroenterologist, physiatrist;
- remember that family attitude, even if not legally binding, is fundamental for the therapeutic approach for patients who cannot express a valid and informed consent.

We know that family opinions are not legally relevant and cannot stand for patient will, despite it seems correct for us to acknowledge family will.

**ETHIC ASPECTS**

Could surgeons refuse to perform surgery on a patient in good health (considering old age) just because life expectation cannot be extended further?

This question has two different answers. The first answer is that they do not; in fact, this choice would imply the violation of responsibility parameters of medical profession. Moreover, we should consider that a doctor does not have rights to exclude the use of surgery – if it is technically possible and can reasonably bring to a success – just because probably the patient will not live any longer, since his old age. If we start from such assumptions, we could deny the chance of survival of a large number of patients.

Anyone who follows the ethic debate about caring in the old age has surely noticed that patient’s “age” is considered a “therapeutic indicator”, like a discriminant parameter to decide if we should assist or not the aged patient using expensive procedures or surgery.

If age could be a useful parameter to evaluate the outcome of a therapy, it could not be the only parameter to define a risk-benefit calculation. This kind of evaluation would translate into an interest to perform procedures only in patients who, once recovered, would be useful and productive for the society.

The appearance of this “ethical utilitarianism” in the health-care environment suggests as primary standard the calculation of results such as capability and productivity in a lifetime, a reductive and anti-personalist vision of the quality of life concept. So, whoever needs more help because of age or disability, such as elderly people, is penalized instead of being supported.

The personalist principle instead considers the single person more important than science and community interests, and this should be considered the main reference when taking care of patients. In this context, human life is considered as an inviolable value itself; old people are no more reputed as parasites for our society, but as a value, so that they are not excluded. Conversely, the community should improve social, cultural and creative involvement of elderly people. Adopting this principle assumes to evaluate social consequences of...
this clinical decision, in order to share advantage and disadvantages equally. Because health value is necessary, it is also indispensable for every single person to be co-responsible. Well-being is a necessity as such as should be managed, adopting well balanced life styles, not abusing of drugs and not undergoing useless procedures and treatments that pinch resources to whom really needs them. Guided by these principles, we retain that the health service, considered as organization and use of available resources, should look at the criteria of sociality and subsidiarity, according to which elderly people must be treated on the basis of their necessities, without discounts. Physicians behaviour towards elderly, fragile and sick patient should be levelled out to the same criteria used for every medical practice: choosing the most appropriate therapies (evaluating the risk-benefit correlation) and proportioned to the clinical case; requesting the informed consent; humanizing treatments. But this is not taken for granted. Talking about health service means discussing about limited resources, and their use is influenced by social culture, that considers elderly people in a negative way. In the international environment it has been discussed about the risk of distinguish treatments along with the chronological age. The supporters of reduced quality treatments for elderly people assert:

- elderly people should quit sanitary assistance in order to support youth people assistance;
- society should use less resources for elderly people, in order to use more for youth people;
- if medical treatments must be rationed, it is more fair to ration them concerning the chronological age.

Opposing to these thesis, another group of people asserts:

- chronological age is an arbitrary and unsuitable parameter; elderly people are a heterogeneous group and many of them could live longer life when treated in a right way;
- needing is the best parameter for health service distribution: elderly people need more treatments as they have higher risk of inability or getting sick;
- decisions concerning therapies should be adopted exclusively basing on physician’s evaluation, together with the patient and his family.

Chroniclogical age parameters, as well as a determining index to establish how to use resources for health service, has been debated for a long time. Although it has not been officially adopted in any country, it has effectively been applied as a reference point, unofficially. For example, many medical centers practicing heart transplants in US do not accept patients over 50-55 years old. The same parameter is applied for dialysis treatment and kidney transplants in those countries where resources are limited. Particularly, since many years, in UK patients are excluded basing on the age: patients older than 55 years old are reasonably excluded from therapies. Also for micro-allocative selections at patient’s bedside, chronological age finds many agreements: for example, in intensive care units, when it is time to decide to whom to assign the only seat available, it is usually given to the younger patient.

This does not mean that chronological age should never be considered as a selective parameter: instead, it should not be considered as the only one, but as a susceptible parameter to invalidate, totally or partially, medical benefit connected to the treatment. In other words, chronological age constitutes a useful factor to establish proportionality judgment so that, when it is inevitable the comparison between different patients due to shortage of resources, to establish a major or minor “benefit probability” connected to the treatment. Therefore, if the evaluation of therapeutic proportionality will lead to select and treat the younger patient, disadvantaging the older, this choice will not be the result of a preliminary criterion, but it will be based on different therapeutic chances connected to specific clinical situations of the two patients. 

**FINAL CONSIDERATIONS**

In the era of knowledge and benefits due to progression, paradoxes and contradictions of medicine are underlined, forced by economical restrictions preventing the usage of technological and innovative treatments: so, which are the parameters that physicians should keep in consideration? If in the past, in fact, medical treatment was only guided by the patient benefit, or rather by the clinical interest (paternalistic model), nowadays in the actual ethical context the physician must “make the right choice”, “in the right way”, according to science, according to patient, and also, according to collective parameters. Guidelines, always more often invoked, can provide a useful reference point to better act respecting economical parameters, but remembering that health care service cannot be administered exclusively based on financial and administrative logic, it should be based on patient’s centrality and humanization of treatments.

It is therefore indispensable to reaffirm the authentic meaning of medicine, meant not as the mere restoration of human body, but as the whole safeguard of human health. Therefore, we retain that the physician cannot and should never be a passive executor, but also he should not be left alone when leading with high complexity situations.
Different elements making every choice difficult, and not without enormous risks loom over physicians, regarding if and how to act, and particularly over surgeons. Very often they find themselves in a real grip: on one side, patients’ inclination to criminalize any clinical choice which can lead to unsatisfactory outcome; on the other side, the fear of legal issues (malpractice); in the end, hospital management pressure to reduce costs against the clinical needs and the safeguard of patients’ health. Physicians are increasingly left alone.

We need to create conditions for a “great pact” of collaboration between physicians, citizens, administrators and politicians, to give an answer to the new and increasing healthcare needs in a redefined ethical and normative contest.

We conclude remembering the teaching of Immanuel Kant (1724-1804). In *Grounding for the Metaphysic of morals* (he wrote “Act in such a way that you treat humanity, whether in your own person or in the person of any other, never merely as a means to an end, but always at the same time as an end”. Translated by Ellington, James W. (3rd ed.). Hackett. 1993, p. 36. 4: 429 ISBN 0-87220-166-X.).

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