



Decision-making about surgery in the elderly

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At the beginning of the third millennium, surgery in the older patient has become more and more common; this, due to the increasing number of individuals reaching old age and requiring surgery, together with continuous advancements in surgical and anesthesia techniques. In addition, quality-aimed initiatives developed in the last years—addressing organizational effectiveness, clinical risk management and patient’s satisfaction—have enriched the conceptual horizon to which professionals should refer when planning and organizing the process of care. Patient empowerment also has contributed to increase their willingness toward procedures that were only exceptionally performed years ago in the older patient. As a consequence, new expectations and challenges have arisen for both professionals and patients, making the decision about surgery in the elderly patients a complex and multifaceted process.

To obtain the most favorable results, appropriate preoperative assessment, effective communication on the goals the surgery aims to obtain, patient’s optimization, reduction of the impact exerted by surgical aggression and adequate perioperative management are fundamental. This Special Issue of ACER aims to provide an overall assessment on the latest developments in the field and to offer a comprehensive vision of this topic, in accordance with the fundamental principles of perioperative geriatric medicine: patient-centered care, multi-professional comprehensive assessment and timely discharge planning.

Recognized goals of preoperative anesthesia consultation are the evaluation of patient’s health status to define surgical risk, and the anticipation of possible complications together with optimization and planning of preventive strategies [1]. Pathophysiological and clinical specificities of geriatric patients together with new trends in care organization, such

as implementation of models of care, team-based care and process standardization to be balanced with precision medicine have caused a substantial evolution in the approach to preoperative assessment in geriatric surgery, at least in the most advanced organizations. As described in the article “Preoperative evaluation of the elderly surgical patient and anesthesia challenges in the XXI century” [2] preoperative evaluation should be regarded not as a self-standing step, but as a privileged occasion for enlightening perioperative criticalities and concerting the whole perioperative plan.

In referral to surgery, frailty probably represents the most challenging condition in the elderly patient, given its functional pattern of reduced resistance to stressors and its intrinsic trend toward developing cycles of self-perpetuating precipitating events. This has been shown in a number of studies performed in cardiac, oncological, vascular, orthopedic, and general surgery [3], where frailty was reported to be associated with increased mortality, postoperative complications and length of stay. The increasing number of papers investigating relationships between frailty (regardless the way it is scored) and surgery testifies about both concerns among professionals regarding surgical outcome in the oldest old, and a need for methods to univocally and effectively screen preoperatively patients at major risk. However, together with an increasing awareness about frailty as risk factor for adverse surgical outcome, a misleading trend seems to emerge too: that of grouping by a unique, catch-all and coarse label of “frail” an heterogeneous patients cohort with different needs, uncritically adopting preconceived approaches in decision-making about surgery: a way to devise ageism in more modern terms, neglecting at the same time other important clinical variables such as locomotor, cognitive, sensory and psychosocial capacities? an answer targeted on professionals’ instead of patients’ needs? This intriguing and tricking issue is widely analyzed in the article “The place of frailty and vulnerability in the surgical risk assessment. Should we move from complexity to simplicity?” [4].

One of the most fearsome complications in the elderly is postoperative delirium (POD). Often occurring undetected,

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seldom prevented by multi-targeted proactive measures despite its largely demonstrated preventability, frequently wrongly attributed to anesthetic drugs, POD can be followed by increased mortality and morbidity: mostly, when not promptly detected and treated, it may cause permanent, severe cognitive impairment requiring institutionalization [5]. In the decision process about surgery, the risk of POD should be regarded as a critical issue requiring high levels of attention and team-based converged strategies aimed to optimize patient-related and procedure-related risk factors. Principles of POD prevention, detection and treatment and related methodological considerations are developed in the article “Pre- and postoperative management of risk factors for postoperative delirium: who is in charge and what is its essence?” [6].

The time between preoperative evaluation and surgery has shown to represent a fruitful occasion for increasing functional reserves by structured exercise programs, correcting nutritional deficits, adjusting medication and enhancing cognitive and psychological status. By adopting prehabilitation strategies, surgical outcome can significantly improve, especially in older and frail patients [7], for which postoperative period is often incompatible with physical exercise, due to pain, fatigue, weakness, lack of sleep or anorexia. The feasibility in older patients of this innovative strategy is treated in the article by Carli and Ferreira “Prehabilitation: a new area of integration between geriatricians, anesthesiologists and exercise therapists” [8].

When managed in accordance with ERAS (Enhanced Recovery After Surgery) principles, postoperative course can be regarded as a further way to improve surgical outcome. Early mobilization and nutrition, reduced use of indwelling catheters and optimal postoperative analgesia allow patients to better recovering from surgery, with reduced risk of muscle deconditioning, malnutrition and incontinence. Even though demanding in older, frail patients, the ERAS approach has shown to be feasible also in the elderly [9]; patient information, inspiration and empowerment are fundamental in succeeding. The subject, that represents a sort of revolution in respect to traditional postoperative management, is fully investigated in the article “Enhanced Recovery After Surgery (ERAS): principles, practice and feasibility in the elderly” [10].

The need for organizational solutions aimed to answer the needs of older surgical patients has determined the definition and implementation of a number of dedicated models of care based on collaborative work among surgeons, geriatricians and anesthesiologists [11]. These structured units offer competitive advantages in comparison to traditional surgical care, mostly in terms of process control. The opportunities provided by Proactive care of Older Patients undergoing Surgery services (POPS) in terms of complications reduction and improved outcome are illustrated in the article

“Proactive care of older people undergoing surgery” [12]. Peculiar aspects linked to emergency surgery and POPS are treated by A. Vilches-Moraga and coauthors in “Geriatricians and the older emergency general surgical patient: proactive assessment and patient-centered interventions—Salford-POPS-GS” [13].

Despite the importance of postoperative quality of life and expected outcomes after surgery in the older patient, this subject has been so far poorly studied, due to many reasons: function is actually usually self-reported and therefore subjective, length of stay can be influenced by the adoption of ERAS protocols, and mostly a lack of standardization in outcomes measurements can be found [14]. This important aspect of decision-making process is critically analyzed in the article “Functional recovery and patients reported outcomes after surgery” [15].

Ensuring continuity of care after discharge from surgical units is a critical factor, the importance of which was recognized long ago [16]. The lack of a suitable discharge planning and proper transition programs increases the risk of quick re-admission and may negatively affect both functional status and quality of life. In their article “Management of care transition and hospital discharge”, Zurlo and Zuliani provide a wide analysis of corner points and methodological aspects of this critical phase of the care process [17].

One of the most important non-clinical elements to consider in geriatric surgery is patient’s preferences and existential perspective. Once risks and advantages have been defined, surgery in fact should be eventually inserted in the existential perspective of the patient and favor what is most important for him/her [18]. There are no preconceived, one-size-fits-all solutions: understanding what is the right choice can become extremely difficult, mostly when cognitive impairment is present. Where to fix the living will and how to manage challenging situations is dealt with in the article by Holmes and coauthors “Patients preferences and existential perspective: which weight has to be given and how should patient’s expectations be guided?” [19].

Independently from biological age, the focus of preoperative evaluation in the older person is the feasibility, advantages and limits of the surgical treatment. What marks the difference with the adult is that, whereas in the latter the main goal is healing the condition that requires surgery, in the elderly patient the goal is ensuring the best possible lifespan together with the best possible quality of life. As older patients are a widely heterogeneous group, reaching this goal requires both clinical and non-clinical investigation and skills. It is in the aim of offering a global perspective on the elements to consider for deciding in geriatric surgery that the articles composing this special issue have been selected and merged.

It is well known that best achievements in science occur when different disciplines work closely together: in the

case of perioperative care of the older persons, the alliance between those who are in charge of pre-surgical optimization, prevention and management of pain and patient safety, those who hold the knife in their hands and those who first introduced the concept of comprehensiveness and care personalization in the medical practice seems to be a promising one. It is in this spirit that the present editorial and all the following articles composing this special issue of “Aging Clinical and Experimental research” have been written.

Compliance with ethical standards

Conflict of interest The authors declare that they have no conflict of interest.

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