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Editorial

Trauma & Emergency Surgery - How to Globally Improve in-Hospital Response in Europe?

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Editorial

Mostly in European countries, a progressive focus on planned activities at the expense of the urgent seems to have undermined the ability of surgeons in general to intervene in emergency situations outside their area of specialization.

In 2007, the Association of Surgeons of Great Britain and Ireland [1] recognized that the standards of care for emergency surgical admissions were often unsatisfactory. Highlighted was the failure to prioritize patients, inadequate senior input and unsatisfactory allocation of infrastructure and manpower. Emergency surgery was characterized as the "Cinderella Service".

In 2012, a multicentre audit to measure non-risk-adjusted outcome after emergency laparotomy in order to establish a baseline has been published by the UK Emergency Laparotomy Network [2]. Data from 1853 patients were collected from 35 hospitals. Mortality rates varied from 3.6% to 41.7% and unadjusted 30 day mortality was 14.9% for all patients and 24.4% for patients aged 80 or over.

Recently, in the United States, Scott et al., [3] referred that emergency general surgery represents 11% of surgical admissions and 50% of surgical mortality. A set of 7 operative procedures were identified which collectively accounted for 80.0% of procedures, 80.3% of deaths, 78.9% of complications, and 80.2% of inpatient costs nationwide. These 7 procedures were partial colectomy, small-bowel resection, cholecystectomy, and operative management of peptic ulcer disease, lysis of peritoneal adhesions, appendectomy, and laparotomy.

It looks essential to redesign our training curricula, in order to enable surgeons and residents in the surgical specialties to acquire essential basic skills. While in elective surgical practice increasing sub-specialization is possible and even desirable, in the surgical treatment of the critically ill patient and, in particular, the severely traumatized, such a situation may not be feasible. Often these patients have multiple lesions in different anatomical regions, any one of which may be fatal. In addition, these patients have serious compromises in their physiology by phenomena such as hemorrhage or sepsis. Under these circumstances an approach is therefore required which prioritizes the timely return of physiology, often using non-conventional surgical maneuvers, which differ from those commonly used in elective surgery because they are not, in most cases, definitive procedures. In addition, the multiplicity of injuries often requires the contribution of specialties not always immediately available. In these circumstances, it is necessary for someone to take the helm, assigning priorities and leading the interventions. Such a role can only fit a surgeon with recognized competence in appropriate decision making and in performing the range of the emergency procedures required [4].

The study programs must enable the acquisition of a wide range of skills, not only in terms of surgical techniques but also of decision-making and scientific knowledge, with regard to the initial approach to the patient with severe trauma or other acute life-threatening disease and to major acute pathophysiological themes, such as shock and sepsis. The procedures considered to be essential in each anatomical area should be the minimal technical skills required. The emphasis should be placed not on the ability to perform all definite procedures in

each area but rather to ensure, with temporary surgical procedures, in a damage control perspective, stabilization and subsequent transfer of the patient to a more specialized level of care. In addition, effective involvement in the postoperative course of these patients, as full interlocutors of the therapeutic plan, with updated scientific knowledge in areas such as hemotherapy, nutrition and infection control. Finally, the candidate must prove capable of coordinating a multidisciplinary team [4].

In the United States, the surgical panorama already includes this type of training. Acute Care Surgery was created from the existing Trauma Surgery program, with its scope not only the surgical treatment of traumatized but also the surgical critically ill patient with non-traumatic pathology [5,6].

A similar proposal was presented in Portugal in October 2011 [7] but still waits approval by the Portuguese Medical Association (Ordem dos Médicos), evidence of the resistance always faced by a project aimed at changing the status quo.

Fortunately, the European Union of Medical Specialists (UEMS) has recently launched a European Board of Surgery Qualification (EBSQ) in Emergency Surgery [8]. For this purpose, emergency surgery has been defined as "surgery that is required to deal with an acute threat to life, organ, limb or tissue caused by external trauma, acute disease process, acute exacerbation of a chronic disease process, or complication of a surgical or other interventional procedure" and as a "transferable competency" which requires "the acquisition of relevant knowledge of the basic sciences, surgical anatomy, applied physiology and pathology" and "the ability to undertake those abdominal (including urological), thoracic, vascular and soft tissue procedures that need to be performed within 24 hours".

The first examination for this qualification took place on April 2016 in Vienna, just before the 17th Congress of the European Society for Trauma and Emergency Surgery (ESTES). Very important the contribution of ESTES for this initiative, with the UEMS working group led by Jonathan Tilsed, the current president. Candidates successful were awarded the title "Fellow of the European Board of Surgery in Emergency Surgery - F.E.B.S./EmSurg".

This EBSQ in Emergency Surgery is a 2-stage quality validation process consisting of (1) an Eligibility assessment and (2) an Examination.

The Eligibility is based

(a) On the candidate's operative experience (the logbook must be supported by two independent experts) and includes

(b) A requirement for publication of work in scientific journals and

(c) Participation in relevant national or international meetings. Candidates should also have completed the

(d) ATLS [9] and DSTC [10] courses - there are alternatives - and

(e) Their specialist training. Operative experience is assessed on the basis of the performance of specific core procedures. The assessment of additional skills is structured in order to accommodate the variety of emergency surgical practice across Europe. The Examination is designed to test the candidate's knowledge. It consists of a (a) 3 hour test of 100 Multiple Choice Questions (MCQ) and

(b) 6 station Objective Structured Clinical Examination (OSCE).

In order to establish this qualification as a European standard, senior surgeons who have made a significant contribution to the field of Emergency Surgery may apply for an Honorary Diploma [11].

To be considered, a candidate must

(1) Have been a consultant surgeon dealing with emergency surgical admissions for a minimum of 10 years,

(2) Have taught on a nationally or internationally recognized course directly relevant to emergency surgery within the preceding 5 years,

(3) have at least one publication in the field of emergency surgery published in a peer reviewed journal during the preceding 2 years,

(4) Have presented to at least one major national or international meeting in the preceding 2 years and

(5) Have contributed to the development of emergency surgery at a regional, national or international level.

In conclusion, to bring emergency surgical care into line with the modern world it looks essential to enable surgeons to reacquire essential basic skills (here symbolized in figure 1, a 14th century painting alluding to the old barber surgeon [12]). This work, even more important when governments and institutions pretend to maintain medical missions in distant destinations, mainly in theaters marked by underdevelopment, political instability or even war, is already being done for the sake of us all.

Figure 1: A barber-surgeon shows the tools of his trade.

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