Emergency Surgery in the elderly: is the attitude changes cause laparoscopy? A 2 years prospective follow-up in 120 consecutive patients, compared with NELA

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INTRODUCTION

World population is becoming rapidly ageing in Western Countries [1]. At the same time these demographic modifications are changing the setting of emergency abdominal surgery in elderly. For this reason, the attention for treatments in the elderly urgent surgical patients is growing [2,3]. The typical diagnoses nowadays include acute incarcerated hernia, cholecystitis, bowel obstruction, colic obstruction and acute appendicitis [4].
Despite it, still little is reported about remote follow-up.

AIM

The aim of our single-centre study is a 2-year prospective follow-up evaluation of morbidity and mortality in elderly patients (> 65 yo) treated with urgent surgical intervention in our Department, compared with NELA and considering Fried Frailty Score System to evaluate frailty.

RESULTS

120 patients, 70 (58.3%) males and 50 (41.7%) females. Diagnoses: cholecystitis (*n:* 43, 35,8%), colic obstruction (*n:* 32, 26,7%), ileal obstruction (*n:* 19, 15,8%), inguinal hernia obstruction (*n:* 13, 10,8%), appendicitis (*n:* 10, 8,4%) and incarcerated abdominal wall hernia (*n:* 3, 2,5%).

70 (58,4%) cases treated with laparoscopic approach, 49 (40,8) cases with laparotomic approach, 1 (0,8%) case surgery conversion from laparoscopic to laparotomic. At 2 years follow-up 86 (71.6%) patients were alive and 34 (28,4%) were dead. We analyzed data with statistical Chi-square considering $p < 0.05$ as significant.

The univariate analysis showed that mortality at 2 years is correlated with type of illness with $p\ 0,000045$, type of surgery (laparoscopic VS laparotomic) with $p\ 0,02$, ASA Score with $p\ 0.0005$ and complications occurred after surgery with $p\ 0.044$. Laparoscopy is associated with lower mortality ($P\ 0.02$).
The linear regression between Frailty Criteria at recovery and after 2 years and type of surgery with estimated mortality shows a lower worsening of frailty rating in the elderly patient from hospitalization to 2 years ($P\ 0,0005$). Considering linear regression, we analysed type of surgery and complications to estimate the patients' mortality with that predicted by regression model ($F\ 0,009$). The evaluation of Frailty Criteria at recovery and after 2 years shows strictly correlation with mortality (real and estimated).

CONCLUSIONS

Our study could be considered a starting point to identify the most useful *Scores* to establish the risk classes of elderly and frail patients undergoing urgent surgery. We need the use of various criteria and above all a long follow-up that allows us to identify mortality and quality of life at a distance. NELA study began considering laparotomy approach while, in subsequent reports, it opened its boundaries even to laparoscopy. Our study considers elderly patient in the emergency setting, in its entirely (considering co-morbidities and fragility) at the recovery and in the following years. In our opinion a more logic approach to the elderly patient can bring to a better rational return to a satisfactory quality of life and long-term follow-up can be a useful tool to identify a better surgical approach and to confirm the value of the laparoscopic one in the elderly.

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