SIOG 2017 - Abstract Submission

Track 4: Modern diagnostics & therapeutic areas

Surgery

O18

FACTORS ASSOCIATED WITH THE INFLAMMATORY RESPONSE TO SURGERY IN ELDERLY ONCOLOGICAL PATIENTS

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I submit my abstract to be considered for the following award: SIOG Young Investigator Award

Introduction: The inflammatory response to surgery is a complex mechanism and influenced by patient and disease characteristics, as well as by characteristics related to the surgical procedure itself. Although intended to be protective, an inflammatory response can cause collateral tissue damage and lead to pathology. Especially in the elderly patient this can lead to functional loss.

Objectives: To identify pre- and peroperative factors associated with the extent of the inflammatory response following surgery in the elderly.

Methods: Patients of 65 years and older undergoing a surgical procedure for a solid malignant tumour were prospectively included in an observational cohort study. Inflammatory factors were measured in blood serum samples pre- and postoperatively: C-reactive protein (CRP), Interleukin-1b (Il-1b), Interleukin-6 (Il-6), Interleukin-10 (Il-10), Interleukin-12 (Il-12), and Tumour necrosis factor-alpha (TNF-α). To measure the surgery-evoked inflammatory response, preoperative results of the inflammatory factor assay, were compared with the postoperative results.

Results: Between July 2010 and April 2014, blood serum samples of 224 patients were obtained. One-hundred-eight patients (48.2%) were male, median age of patients 72 (65-89) years. The predominant diagnosis was carcinoma, 157 (70.1%). Patient or tumour characteristics were not associated with baseline serum concentrations of the inflammatory markers. Multivariate analysis identified anaesthesia duration and blood loss as independent predictors for the peroperative change in CRP ((B: 0.026; 95% 0.01-0.04)/ (B: -0.013; 95% -0.016--0.01)) and IL-1b ((B: 0.002; 95% 0.0-0.004)/ (B: -0.001; 95% -0.002--0.001)). Furthermore, the change in Il-6 identified anaesthesia duration (B: 1.21; 95% 0.9-1.5), intracavitary surgery (B: 116.60; 95% 14.9-218.3) and blood loss (B: 0.08; 95% 0.0-0.1) as predictors. For the change in Il-10, intracavitary surgery (B: 63.40; 95% 9.5-117.3) and major surgery (B: 126.15; 95% 75.8-176.5) were identified.

Conclusion: The inflammatory response following surgery is influenced by surgical characteristics rather than by preoperative factors, including disease stage, neo-adjuvant treatment and comorbidities. Patients undergoing longer surgical procedures, intracavitary surgery or with more blood loss, show the greatest inflammatory response to surgery.

Disclosure of Interest: None Declared

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