

ABSTRACT

TITLE OF THE ABSTRACT : Outcomes of Peri-operative Immunonutrition in patients with Esophageal carcinoma undergoing surgery.

DEPARTMENT : General Surgery

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OBJECTIVES:

Primary objective: To observe the effect of enteral immunomodulating nutrition on length of hospital stay in a patient with esophageal carcinoma undergoing surgery.

Secondary Objective: To observe the incidence of post-operative complications, namely pneumonia, surgical wound infection and anastomotic leak.

METHODS:

Prospective interventional study with retrospective controls, approved by the Institutional Review Board with financial grant for the same. Total of 43 patients with esophageal carcinoma who were planned for elective surgery were included in the study (21 cases and 22 controls). The cases were started on an immune enhancing supplement in form of Glutamine powder at a dose of 0.3gms/kg/day four days prior to surgery and were continued on the same post-operatively for a period of two weeks. The total number of days of hospital stay and the incidence of post-operative complications (pneumonia, wound infection and anastomotic leak) were compared between the two groups.

RESULTS:

43 patients who had esophageal carcinoma and who were planned for elective esophagectomy were studied (21 cases and 22 controls). The cases were patients who underwent elective esophagectomy between April, 2015 and August, 2016. These patients received immune enhancing supplement in form of glutamine. The controls were patient with esophageal carcinoma who underwent elective esophagectomy between January, 2013 and December, 2014. These patients had not received immune enhancing supplements. Statistical test used to compare the total number of days of hospital stay between the two groups was Mann Whitney U test. The p value obtained when comparing the groups of individuals who got immunonutrition and those who did not receive the same was 0.004 which was statistically significant. This meant that the patients who got immunonutrition should stay in the hospital less than those who did not. When we compare the ICU stay of these two groups, there was no significant difference ($p=0.295$).

The incidence of post-operative pneumonia among the groups were also compared, even if there was difference in proportions(10% v/s 32%), this was not statistically significant ($p=0.132$). In the case of post-operative wound infection, the groups were not different($p>0.999$). Anastomotic leak was less among immunonutrition group, however it was not statistically significant at 5% alpha level. The incidence rates were compared using Fishers exact test in this study. There were no serious side-effects associated with administration of Glutamine powder.

CONCLUSION:

Peri-operative Immunonutrition may be safe and effective in reducing the total length of hospital stay in patients with esophageal carcinoma undergoing elective esophagectomy as compared to standard nutrition. However, further large randomized control trials are required to further prove the efficacy of glutamine in patients with esophageal carcinoma undergoing elective surgery.