



EFFECT OF EARLY IMMUNONUTRIENT SUPPLEMENTATION AFTER ENTERIC ANASTOMOSIS

Surgery

Dr Indu Bhushan Prasad

Associate professor, department of surgery, pmch patna

Dr Prince Raj*

Junior resident, department of surgery, pmch patna *Corresponding Author

Dr Chandrahas Yadav

Junior resident, department of surgery, pmch patna

ABSTRACT

BACKGROUND- our study aimed to show the effect of early immunonutrient supplementation after enteric anastomosis **METHOD-** 60 patients were included and divided in group A(patient on NS, RL, 5%D) and group B(patient on immunonutrient supplementation) and compared **RESULTS-** in our study we find that number of infectious complications was higher in group A patients (patient on conventional approach treatment) than group B patients (patients on immunonutrients treatment). No significant difference in anastomotic leak was present in both the groups **CONCLUSION-** immunostimulating parenteral nutrition helps to reduce number of infectious complications, improves function of immune system, and has no influence on surgical complications

KEYWORDS

Conventional treatment(NS, RL, 5%D), immunonutrients(arginine,glutamine,omega-3-fattyacid)

INTRODUCTION:

Major abdominal operations lead to post traumatic deregulation of immune system, characterized by suppression of immune functions. The increased susceptibility to infections results from multitude of metabolic or immunologic imbalances according to trauma, tissue ischemia, surgical injury, length of operation, loss of blood associated illnesses and malnutrition.

Mucosal lesions and increased intestinal permeability can provoke translocation of bacteria and endotoxins and initiate immune inflammatory response and so thus have high impact on the development of complications.

MATERIALANDMETHODS:

The study was conducted in patna medical college and hospital in 60 patients from june 2019 to june 2020. During the post-operative period, patients were randomly allocated to two groups: group A (on NS, RL and 5%D) and group B (on immunonutrients)

- Inclusion criteria: patient who underwent enteric anastomosis (gastrocolic, ileoileal, ileocolic) on emergency or elective basis

Exclusion criteria:

1. Patients with ASA grade four to six
2. Re-laparotomies
3. Immunosuppressed patients
4. Pregnant females
5. Patients operated outside PMCH

RESULTS:

The groups were comparable for all key baseline and surgical characteristics. Infectious complications in group A was 26.67%(n=30) and in group B was 6.67% (n=30) being this statistically significant (p<0.05)

There were 3.33% anastomotic leak complication present in both the groups which was statistically insignificant No significant difference between the groups was found with respect to mortality.

Group	A	B
Number of infectious complications	8	2
Number of subjects	30	30

Number of infectious complications

Group	A	B
Number of anastomotic leaks	1	1
Number of subjects	30	30

Number of anastomotic leaks



Series 1: group A

Series 2: group B

DISCUSSION:

In our study we observe that number of infectious complications was less in group B patients. Arginine protects against ischemia or reperfusion injury, promotes T-cell maturation. Glutamine serves as an important energy source for gut mucosa. Omega-3-fatty acids have a role in modulating the production of both lipids (eicosanoids) and proteins (cytokines) mediators. They reduce systemic inflammation, minimize hepatic ischemic injury and normalize vascular flow properties.

Anastomotic leak was statistically insignificant because it chiefly depends on the nature of suture material used and surgical technique.

CONCLUSION:

In our study we observe that infectious complications was less in immunonutrients supplemented group, whereas anastomotic leak was statistically insignificant.

FUTURE PROSPECTS :

Use of immunonutrition within an ERAS may be more effective.

REFERENCES:

1. Gianotti I, nespoli I, Saregnti M, Nepsoli A. Nutritional therapy in surgical patients; an update. Minerva Anestesiologica, 2003;69: 275-80
2. Kemen M, Senkal M, Homann, H-H, Mumm A, Dauphin, A-K, Baier, Windeler J, Neumann H, Zumbel V; Early post operative enteral nutrition with arginine, omega-3-fatty acid, ribonucleic acid supplementation diet versus placebo in cancer patients 1995; 23:652-659
3. Chen W-j., Yeh S-L. Effects of fish oil in parenteral nutrition, 2003;19: 275-279
4. Kirk, HJ, Heys, SD: Immunonutrition. Br J Surg 2003;90: 1459-1460
5. I. Marnao, R. profida, M. Pizzella, M. Grassia, M. Petrillo, G. Esposito, et al; clinical and immunologic impact of early post-operative enteral immunonutrition, after total gastrectomy in gastric cancer patients: a prospective randomized study, Ann Surg Oncol 2013 3912-3918