Scientific Summary of a Medical Research Paper

Hypoalbuminemia as a predicting factor for postoperative complications in patients with gastric cancer

Keywords: gastric cancer, complications, nutritional status

Objective: Gastric cancer (GC) is currently the fifth most common cancer worldwide, with an annual incidence of about 1 million cases. Unfortunately, due to the relatively late stage at which the diagnosis is made in western countries, survival remains poor. Despite the numerous advancements in adjuvant chemotherapy and radiotherapy, at this point, gastrectomy with lymph node dissection remains the only mainstay treatment for gastric cancer. Recent randomized controlled trials have reported that up to 46% of patients undergoing gastrectomy suffer from postoperative complications. Postoperative complications include *local complications* and *systemic complications*. Perioperative albumin concentration, which represents the nutritional status of the patients undergoing gastrectomy, might serve as a predictor for postoperative complications. This study aims to evaluate this question.

Methodology: All patients who underwent gastrectomy for cancer in our institute during the period of 2007-2015 were retrospectively evaluated. Post-operative albumin level was extracted from the medical charts. Only patients with post-operative serial albumin level were included. Decrease of more than 3g/L in albumin levels in the 5 day postoperative period was considered a meaningful decrease. Postoperative complications were classified according to the Clavien-Dindo classification. Dingo score above 3 was considered a major complication. Statistical analysis was conducted in order to correlate major complication with decrease of albumin levels.

Results: Overall, 149 patients underwent gastric resection for malignancy during the evaluation period. Serial Albumin levels were recorded in 114 patients. Demographics, including patients' age, gender and type of operation are shown in Table-1 . The overall complication rate was 40.9% (61 patients), of which 45.9% were classified as major complications (28 patients). Decreased albumin levels were noted in 32% of the major complications group, compared to 4% in the non-major complications group (p=0.001).

		Decreased albumin	Same albumin
		12	102
Age (years)		72 ± 10	68 ± 12
Gender	Female	41.7% (5)	32.4% (33)
	Male	58.3% (7)	67.6% (69)
Operation	Proximal gastrectomy	16.7% (2)	14.7% (15)
	Total gastrectomy	25.0% (3)	19.6% (20)
	Subtotal gastrectomy	58.3% (7)	65.7% (67)

Conclusion: Our study supports the use of post-operative serial albumin levels as a tool for evaluating the risk of developing major complications.