



## SURGICAL EVIDENCE

By

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We present published evidence on surgical practice that does not require specialized training or significant resources for its implementation. Surgeons are advised to read the full text of the evidence before following the study conclusions.

### **Extensive intraoperative peritoneal lavage as a standard prophylactic strategy for peritoneal recurrence in patients with gastric carcinoma**

*Kuramoto M, Shimada S, Ikeshima S, Matsuo A, Yagi Y, Matsuda M, Yonemura Y, Baba H.*

Ann Surg. 2009;250:242-6.

**Objective:** This prospective randomized multicenter study aims to evaluate the efficacy of extensive intraoperative peritoneal lavage followed by intraperitoneal chemotherapy (EIPL-IPC) on the overall 5-year survival of advanced gastric cancer patients with intraperitoneal free cancer cells without overt peritoneal metastasis (CY+/P-). The study also aims to determine the merit and reliability of EIPL-IPC therapy as a prophylactic strategy for peritoneal metastasis. **SUMMARY Background Data:** Although the prognosis of advanced gastric cancer patients with CY+/P- is extremely poor, a suitable standard regimen for treating such patients has not yet been established.

**Methods:** A total of 88 patients with CY+/P- from 1522 patients with advanced gastric cancer at multicenters were enrolled in this study and were randomly allocated to 3 groups: surgery alone group, surgery plus intraperitoneal chemotherapy (IPC) group, and surgery plus EIPL and IPC (EIPL-IPC) group. Prognostic significance of EIPL-IPC therapy was evaluated by Kaplan-Meier curves, and its value as an independent prognostic factor was assessed by univariate and multivariate analyses.

**Results:** The overall 5-year survival rate of the patients with EIPL-IPC was 43.8%, and this data were significantly better than that of the IPC group (4.6%,  $P < 0.0001$ ) and the surgery alone group (0%,  $P < 0.0001$ ). Among various recurrent patterns, the EIPL-IPC group had a significantly lower incidence of peritoneal recurrence than both of the other groups ( $P < 0.0001$ ). Univariate and multivariate analyses revealed that EIPL was the most significant impact factor.

**Conclusions:** The present study clearly revealed that EIPL-IPC therapy significantly improved the 5-year survival span of advanced gastric cancer patients with CY+/P-. Thus, EIPL-IPC therapy is strongly recommended as a standard prophylactic strategy for peritoneal dissemination.

## A prospective evaluation of the bedside index for severity in acute pancreatitis score in assessing mortality and intermediate markers of severity in acute pancreatitis

Singh VK, Wu BU, Bollen TL, Repas K, Maurer R, Johannes RS, Morteale KJ, Conwell DL, Banks PA.

Am J Gastroenterol. 2009;104:966-71.

**Objectives:** Our aim was to prospectively evaluate the ability of the bedside index for severity in acute pancreatitis (BISAP) score to predict mortality as well as intermediate markers of severity in a tertiary center. **Methods:** The BISAP score was evaluated among 397 consecutive cases of acute pancreatitis admitted to our institution between June 2005 and December 2007. BISAP scores were calculated on all cases using data within 24 h of presentation. The ability of the BISAP score to predict mortality was evaluated using trend and discrimination analysis. The optimal cutoff score for mortality from the receiver operating curve was used to evaluate the development of organ failure, persistent organ failure, and pancreatic necrosis.

**Results:** Among 397 cases, there were 14 (3.5%) deaths. There was a statistically significant trend for increasing mortality ( $P < 0.0001$ ) with increasing BISAP score. The area under the receiver operating curve for mortality by BISAP score in the prospective cohort was 0.82 (95% confidence interval: 0.70, 0.95), which was similar to that of the previously published validation cohort. A BISAP score  $\geq 3$  was associated with an increased risk of developing organ failure (odds ratio=7.4, 95% confidence interval: 2.8, 19.5), persistent organ failure (odds ratio=12.7, 95% confidence interval: 4.7, 33.9), and pancreatic necrosis (odds ratio=3.8, 95% confidence interval: 1.8, 8.5).

**Conclusions:** The BISAP score represents a simple way to identify patients at risk of increased mortality and the development of intermediate markers of severity within 24 h of presentation. This risk stratification capability can be utilized to improve clinical care and facilitate enrollment in clinical trials.

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### BISAP scoring system

One point is assigned for each variable within 24 h of presentation and added for a composite score of 0 - 5.

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#### B UN > 25 mg/dl

**Impaired mental status** (Glasgow Coma Scale Score < 15)

**SIRS** (defined as two or more of the following)

- (1) Temperature of  $< 36$  or  $> 38$  ° C
- (2) Respiratory rate  $> 20$  breaths/min or  $P_aCO_2 < 32$  mm Hg
- (3) Pulse  $> 90$  beats/min
- (4) WBC  $< 4,000$  or  $> 12,000$  cells/mm<sup>3</sup> or  $> 10\%$  immature bands

Age  $> 60$  years

Pleural effusion detected on imaging

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BISAP, bedside index for severity in acute pancreatitis; SIRS, systemic inflammatory response syndrome.

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## Meta-analysis of the need for nasogastric or nasojejunal decompression after gastrectomy for gastric cancer

Yang Z, Zheng Q, Wang Z

Br J Surg. 2008;95:809-16.

**Background:** Nasogastric or nasojejunal decompression has been used routinely to prevent anastomotic leakage, hasten the return of bowel function and shorten hospital stay after gastrectomy for gastric cancer. This meta-analysis evaluates the necessity for such routine decompression.

**Methods:** Medline, Embase and The Cochrane Library were searched. Only prospective randomized controlled trials (RCTs) that compared individuals with and without nasogastric or nasojejunal decompression after gastrectomy for gastric cancer were included. Outcomes evaluated were time to flatus, time to starting oral diet, anastomotic leakage, pulmonary complications, length of hospital stay, and morbidity and mortality.

**Results:** Of 717 patients in five RCTs, 361 were allocated to nasogastric or nasojejunal decompression and 356 to no decompression. Time to oral diet was significantly shorter in the latter group (weighted mean difference 0.43 (95 per cent confidence interval 0.23 to 0.62) days;  $P < 0.001$ ). Time to flatus, anastomotic leakage, pulmonary complications, length of hospital stay, morbidity and mortality were similar in both groups.

**Conclusion:** Routine nasogastric or nasojejunal decompression is unnecessary after gastrectomy for gastric cancer.

**Related articles:**

Randomized clinical trial evaluating the need for routine nasogastric decompression after elective hepatic resection. Pessaux P, Regimbeau JM, Dondero F, et al. *Br J Surg.* 2007;94:297-303.