Injection of fibrin tissue adhesive versus laser photocoagulation in the treatment of high-risk bleeding peptic ulcers: a controlled randomized study.

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Abstract:

BACKGROUND AND STUDY AIMS: A controlled and randomized multicenter study was carried out in order to compare the efficacy of fibrin sealant and Nd:YAG laser photocoagulation in patients with high-risk arterial bleeding from peptic ulcers of the stomach and the small intestine.

PATIENTS AND METHODS: In four teaching hospitals, 53 patients presenting with either active arterial ulcer bleeding (Forrest class 1 a) or a large visible vessel in the ulcer base (diameter over 2 mm, Forrest class 2 a) were treated with infiltration of epinephrine 1: 10,000 followed by the injection of fibrin tissue adhesive (n = 28), or with epinephrine plus laser photocoagulation (n = 25). Permanent hemostasis for at least seven days served as the principal end point; rebleeding, emergency surgery, and hospital mortality served as further end points.

RESULTS: There were no significant differences between the study groups in terms of age, risk factors, initial hemoglobin values, number of patients showing signs of hemodynamic impairment, ulcer size and localization, or bleeding activity. Primary hemostasis was achieved in all patients. Rebleeding rates were seven of 28 and four of 25 among the patients treated with fibrin sealant and laser coagulation, respectively (not significant). There were no significant differences regarding the rates of ultimate hemostasis (24 of 28 vs. 24 of 25), emergency surgery (four of 28 vs. one of 25), or hospital mortality (0 vs. two of 25). No complications occurred with either form of treatment. Patients

who had a visible vessel in the ulcer floor at the first control endoscopy had a significantly higher incidence of rebleeding, regardless of the type of endoscopic therapy.

CONCLUSIONS: We conclude that both the injection of fibrin tissue adhesive and laser photocoagulation are effective methods of treating high-risk arterial peptic ulcer bleeding. As the number of high-risk patients necessary to reach significance are difficult to recruit within a reasonable period even in a multicenter study, a new meta-analysis of all studies now available should be considered.