Table 2. Results of Endoscopic Therapy in the 2 Groups of Patients

	EIS (n=29)	EVL (n=32)	P value
No. of active bleeders	7	9	NS
Control of active bleeding	6 (86%)	8 (89%)	NS
Rate of eradication	26 (90%)	27 (84%)	NS
No. of sessions to eradication	4.6 ± 1.9	3.1 ± 1.2	< 0.05
Time (weeks) for obliteration	7.2 ± 2.4	4.6 ± 2.1	< 0.05

Table 3. Complications Due to Endoscopic Treatment of Esophageal Varices

	EIS (n=29)	EVL (n=32)	P value
Early hazards			< 0.05
Fever	13	3	
Severe retrosternal pain	8	2	
Odynophagia	4	2	
Bleeding	7	1	
Late hazards			< 0.05
Extensive esophageal ulcer	6	1	
Esophageal stricture	1	0	

Table 4. Rebleeding Number, Episodes and Sources in Both Groups of Patients

	EIS(n=29)	EVL(n=32)	P value
No. of patients with rebleeding	6	2	NS
Rebleeding episodes	8	2	
Before eradication achieved	7	1	< 0.05
After eradication	1	1	NS
Sources of rebleeding			
Esophageal varices	2	0	
Esophageal ulcer (treatment-induced)	6	1	< 0.05
Portal hypertensive gastropathy	0	1	

sex, Child-Pugh score, bleeding status, or variceal form before therapy. Sixteen of the 61 (26.2%) patients presented with active variceal bleeding. EIS was able to arrest active bleeding in 6 of 7 (86%) and EVL in 8 of 9 (89%) patients. There was no significant difference in the hemostasis effect for esophageal varices of both groups.

EIS was successful in obliterating the varices in all patients, except in those who died due to hepatic coma or rebleeding prior to obliteration. Twenty-six (90%) patients in the EIS and 27 (84%) in the EVL group achieved variceal obliteration. A mean of 4.6 ± 1.9 sessions completed in 7.2 ± 2.4 weeks was needed for variceal obliteration using EIS. These are significantly higher ($P < 0.05$) compared to EVL which took 3.1 ± 1.2 sessions in 4.6 ± 2.1 weeks for variceal obliteration (Table 2). The mean number of bands required for achieving obliteration was 10.9 ± 3.4, and the mean of absolute alcohol needed for obliteration was 19.5 ± 9.1 mL.

Significant differences were observed in the complication rate between the EIS and EVL groups ($P < 0.05$, Table 3). The most common complications were fever (13 in EIS and 3 in EVL) and retrosternal pain (8 in EIS and 2 in EVL). Four patients in the EIS group and 2 in EVL had odynophagia, and all of them showed spontaneous remission 3 to 4 days after treatment. The most serious of these complications was bleeding. Seven patients in the EIS group and 1 in EVL had variceal bleeding which occurred within the first 2 to 3 endoscopy sessions, before eradication of the varices. Patients were immediately endoscoped, and the bleeding was managed with EIS or EVL according to the initial protocols. Extensive esophageal ulcers were seen in 6 patients with EIS (24%) and 1 (3%) patient with EVL during the treatment course. Most of the ulcers in the EVL patients were less than 1 cm in size and are considered to be an inevitable result of treatment. In the EIS group of patients, the ulcers were more extensive with poorly defined margins, marked edema, and hyperemia of the surrounding variceal wall.

Six patients in the EIS group (8 episodes) and 2 in the EVL group experienced rebleeding in this 1-year study. The difference between the 2 groups for the entire period was statistically significant ($P < 0.05$, Table 4). Most patients experienced rebleeding during the treatment course before achieving variceal obliteration of varices. The source of bleeding in 1 of 2 episodes of EVL patients and 6 of the 8 episodes in EIS patients was treatment-induced variceal ulcer. Only 1 patient in each group had recurrent bleeding after variceal eradication.

No significant difference was found between the 2 groups regarding the recurrence rate of esophageal varices after eradication during a mean follow-up of 12.1 ± 3.3 months (Table 5). Eleven patients (6 EIS, 5 EVL) died during the follow-up period; the difference is not significant. Two patients in the EIS group died of variceal bleeding and 4 due to hepatic decompensation,