THE MALIGNANT OBSTRUCTION OF THE ESOPHOGAS BY ADVANCED CANCER AND RELIEVED BY ENDOSCOPIC TREATMENT

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ABSTRACT

Objective: To study the effect of endoscopic treatment on malignant obstructions of the esophagus. Methods: 64 cases of advanced esophageal cancer patients had obstructions of the esophagus, 7 cases could not be operated on, 57 cases had recurred lesions after operation and radiation therapies. The obstructions were all dilated with esophageal dilators, and then were treated using local chemotherapy, or local administration of elemene emulsion injection and a stent was placed in the esophageal lumen. Results: The obstructions were relieved with dilation for only about one week, but the obstructions, using relieved for more than three months after dilation using other treatments. After dilation, the PR of carcinoma was about 80% in local chemotherapy group, however, CR was about 8% and PR was about 92% in the group of elemene emulsion injection. Conclusion: Endoscopic treatment is an effective palliative method for advanced esophageal cancer.

Key words: Obstruction, Esophageal cancer, Endoscopy.

Advanced esophaged cancer patients with obstructions, who could not take any water and food, were short of nutrition and could not liver for more than a few days. Almost all of them had undergone an operation or radiotherapy and had a recurrent lesion. The patients were very weak and could not support chemotherapy. We used a local combination treatment including dilation, local chemotherapy and put a stent in their esophagus by endoscopy. These obstructions were relieved in a short or long time after treatment and the quality of life of the patients was improved.

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CLINIC DATA ADN METHODS

General Data

Sixty-four patient's cases of advanced esophageal cancer with esophageal obstruction were all definitively diagnosed by endoscopy and pathology; 7 of them who had metastasis could not be operated on, 57 cases had had operations and radiotherapy. Their ages ranged from 40 to 82 years old.

Instruments

Olympus GIF 130 video gastroscope was used. The dilator was produced by Cook USA and the Endoscopic injection needle was made by Olympus, Japan. The digital camera and computer was made by Qinghua University, China. The esophageal stent was made in China.

Method

After an injection of benzodiazepine 10 mg, the examination by endoscope began. When the stricture was found, the wire guide was put in through the stricture and then the endoscope was put out, the stricture was dilated from 0.6 to 1.4 cm gradually by the dilator, the endoscope was put in again, to measure the length of the stricture. Then the endoscope was taken out, but the wire guide remained in the esophagus or stomach. It is better to select a stent which is 2 cm longer below and above the lesion. The stent was put in by an introduction system. After the introduction system was taken out, the endoscope was put in again to see the position of the stent; if misplaced it should be adjusted until the lesion was covered completely by the stent. For the patients who had taken radiotherapy, to some of then local chemotherapy was given, but some only had an esophageal stent. Local chemotherapy was performed by multiple point injection at the base of the carcinoma. MMC 4 mg dissolved in 5 FU 250 mg was separately injected at each point, then anhydrous ethanol 2 ml or

sclerotherapic medicine 6 ml was injected separately at different points. Local chemotherapy was carried out once a week, for 4 to 6 weeks. In the group of elemene emulsion injection, elemene emulsion injection was injected 10–15 ml at multiple points of the base at the carcinoma with sclerotherapic medicine 6 ml, once a week, for 4 to 6 weeks.

Evaluation of Effect

The life quality of the patients was estimated by the quantity of food taken. The estimation of the results of anti-carcinoma was performed using the standard of WHO. Hemorrhage, pain and perforation were included in the estimation of complications of our endoscopic treatment. If bleeding was less than 5 ml it was regarded as no hemorrhage; more than 5 ml was regarded as with hemorrhage. If the pain could be relieved without treatment, it was considered mild pain. If the pain could be relieved by analgesic injection, it was considered moderate pain and if the pain could not be relieved by analgesic injection, it was considered severe pain. In addition, the liver function test and routine blood examination were performed in order to estimate the general toxicity which might be caused by local chemotherapy.

RESULTS

The esophageal obstructions were all temporarily relieved after dilation (Figure 1, 2). The obstructions were relieved for a longer time by putting in an esophageal stent. The obstructions in 10 patients who refused to accept esophageal stent recurred after one week that was then relieved by local chemotherapy. After the esophageal dilation obstruction was relieved for more than three months by local chemotherapy with ethanol or with sclerotherapy but upper digestive tract hemorrhages took place in two patients treated with ethanol. After dilatation, the obstruction was relieved by Elemene Emulsion Injection, in one patient and the carcinoma was completely resolved, (Figure 3, 4).

After treatment, the patients could take semi- liquid food and the liver function was always normal. The condition of obstruction relief is shown in Table 1, the complications are shown in Table 2, the result of tumor reduction is shown in Table 3.

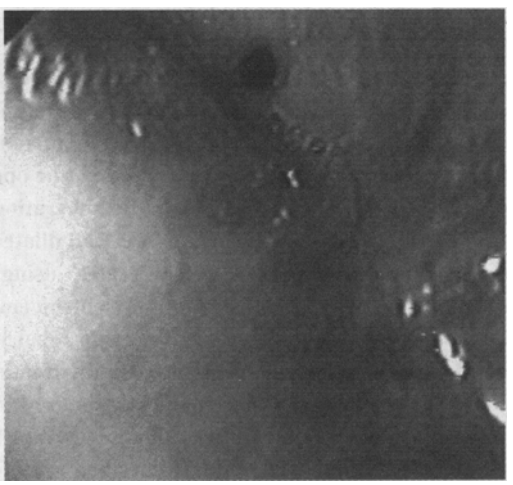

Fig. 1. Before dilatation for the esophageal obstruction

Table 1. The esophageal obstruction relieved after endoscopic treatment

	Dilatation only	Dilatation with chemotherapy	Dilatation with elemene emulsion	Dilatation with stent
Obstruction relieved period	One week	Three months	>three months	>three months
Relieved rate	80% (2/10)	90% (19/21)	>90% (11/12)	>90% (19/21)

Table 2. The complications by endoscopic treatment

	Group 1	Group 2	Group 3	Group 4	Group 5
	(10 cases)	(10 cases)	(11 cases)	(12 cases)	(21 cases)
Hemorrhage rate	20% (2/10)	90% (9/10)	27% (3/11)	25% (3/12)	28% (6/21)
Pain	Mild	Moderate	Mild	Moderate	Moderate
Perforation	0	0	0	0	0

Note: group 1:dilatation only; group 2: dilatation with local chemotherapy plus ethanol; group3: dilatation with local chemotherapy plus sclerotherapy; group 4: dilatation with elemene emulsion injection; group 5: dilatation with stent

Table 3. The result of tumor reduction by endoscopic treatment

	Group 1	Group 2	Group 3	Group 4	Group 5
PR	0	80% (2/10)	82% (9/11)	92% (11/12)	0
CR	0	0	0	8% (1/12)	0

Note: The group was divided as the same as Table 2.

Fig. 2. After dilatation for the esophageal obstruction

Fig. 3. Before elemene emulsion injection

DISCUSSION

For advanced esophageal cancer patients with an unresectable obstruction, the obstruction could be relieved and the quality of life improved by endoscopic treatment by dilatation only or after dilatation with local chemotherapy, or with local injection of elemene emulsion or with an esophageal stent. Endoscopic treatment is a palliative method for advanced esophageal cancer obstruction.

The esophageal obstruction was relieved for only a short time by dilatation without any other treatment, and the obstruction could develop again after dilatation. It could be relieved for a longer time by putting a stent in the esophagus, but the tumor could not be reduced by this method.

It is very convenient to perform esophageal dilatation and put a stent in place using an endoscope. The patient need not be exposed to radiation, furthermore the position of the stent could be easily defined and adjusted; the safety of this method is realizable.

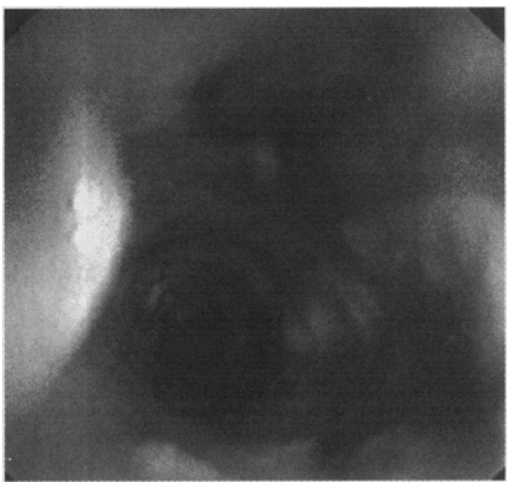

Fig. 4. After elemene emulsion injection

When the carcinoma develop very fast the tumor could be reduced by local chemotherapy and with ethanol or sclerotherapy. In the results we found that there was more effect on tumor reduction using local elemene emulsion injection, however, the patients felt a mild pain after the injection, which could be relieved by the addition of 2 ml of 2% lidocaine.

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