

The Experience of Improved Quality of Life at Home for the Long Term, Using Percutaneous Trans-esophageal Gastro-tubing Drainage for a Case with Terminal Stage Cancer

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We invented percutaneous trans-esophageal gastro-tubing (PTEG) on 1994. And we tried to make PTEG suitable for home care for feeding and drainage cases. This case report presents a less invasive method of esophagostomy and simple and easy maintenance for home care. PTEG allows the surgeon to create an esophagostomy safely and simply even in cases with complications that would make it difficult to create a percutaneous endoscopic gastrostomy (PEG). There were no major complications, such as leakage, infection or bleeding. And the maintenance of PTEG is simple and easy. This case with terminal stage colon cancer was treated with PTEG for drainage, improving the patient's quality of life (QOL) at home for the long term.

Introduction

There are a number of methods for gastro-tubing for feeding and drainage. The easiest method is nasal gastro-tubing, but it is not recommended for patients for long term treatment because of pain and discomfort. Percutaneous endoscopic gastrostomy (PEG) is a good method in this situation¹⁾²⁾, but there are cases with complications that would make it difficult to create a PEG^{3)~7)}. Percutaneous trans-esophageal gastro-tubing (PTEG) is another option to create an esophagostomy in these cases as a trans-esophageal gastrostomy^{8)~15)}. This report presents one case of PTEG treatment and maintenance.

Case

This case is of a 62-year-old male, who underwent a left hemicolectomy for descending colon

cancer. The patient's pathological findings were tub₁, P₀ H₀ M₀ ss n₂: stage IIIb and type C of Duke's classification. He continued ambulatory therapy with oral administration of tegafur-uracil at 450 mg/day. After that he repeatedly received therapies for ileus.

Nine months after the first operation, he underwent an adhesiotomy for the ileus, and disseminations were found in his abdominal cavity, upon which he gradually lost his capacity of ingestion. Then after fourteen months, he received an indwelling catheter for intravenous hyperalimentation (IVH) for home care. However he presented ileus again and was admitted to our hospital, whereupon he received a long indwelling nasal tube for drainage. But the pain in his nose and pharynx became unbearable. And the patient

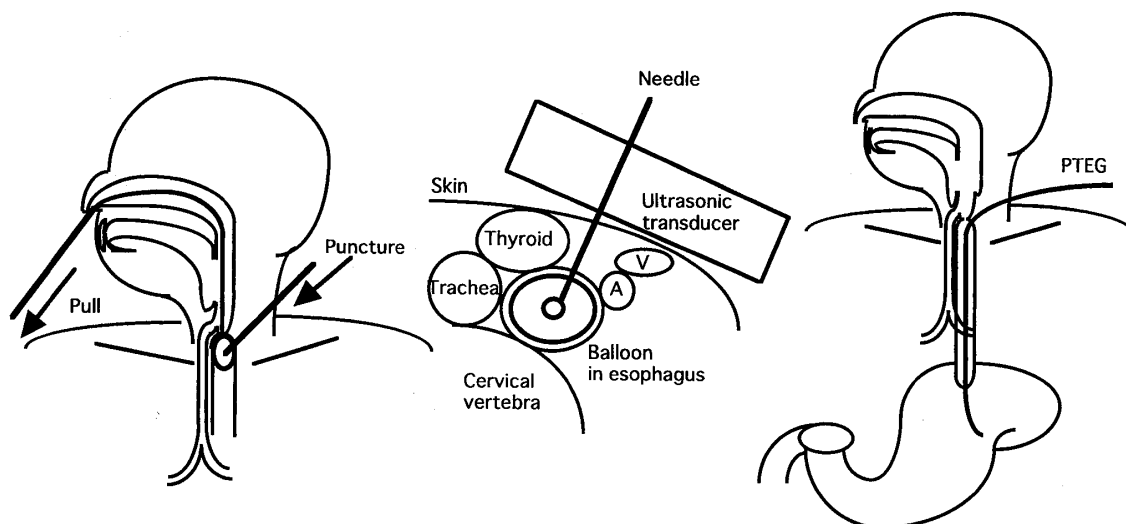


Fig. 1 The method of PTEG

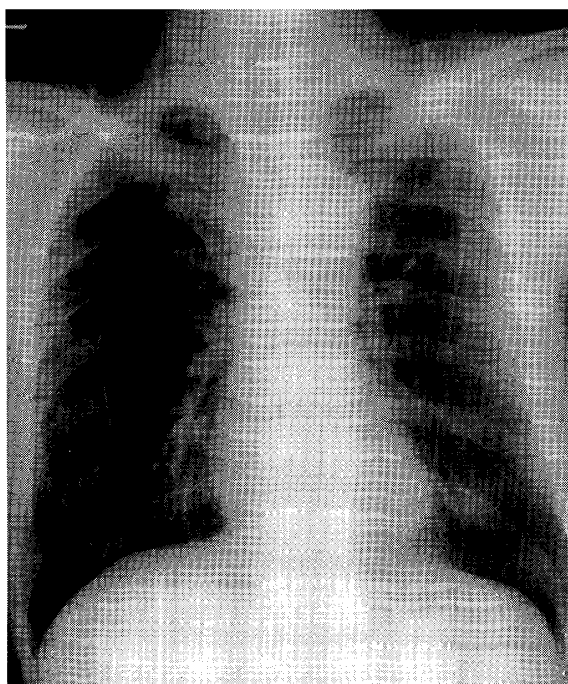


Fig. 2 A X-ray of PTEG

himself wanted to be cared for at home. However we diagnosed him as being excluded for PEG because of his pan-peritonitis carcinomatosis. Therefore we chose PTEG for drainage. Injection of morphine sulfate with an auto-injector controlled his pains from the far advanced cancer. An IVH was sufficient for total parenteral nutrition. This maintenance was done at home.

Materials and Methods

We used PTEG trial kits which included a balloon catheter, a puncture needle, a dilator with a sheath and an indwelling catheter made by Sumitomo Bakelite Co., Ltd^{(16)~(18)} (Fig. 1 and 2).

The insertion procedure : ① insert the balloon catheter through the nose into the esophagus and inflate it aided by conventional fluoroscopy, ② puncture the balloon percutaneously aided by ultrasonography, ③ insert a guide wire, ④ insert a dilator with a sheath, ⑤ insert an indwelling catheter into the digestive tract through the sheath.

Results

We treated this case with PTEG and had no major complications such as leakage, infection or bleeding⁽¹⁹⁾⁽²⁰⁾. The indwelling catheter was able to drain 1,800 ml/day of digestive juice. This catheter was used for the long term affording simple and easy maintenance at the bedside (Fig. 3). Therefore the complaints of pain in the patient's nose and pharynx subsided. And he was able to drink a little and enjoy the taste without discomfort. His improved QOL continued with only home care while he was living with a PTEG for 145 days.

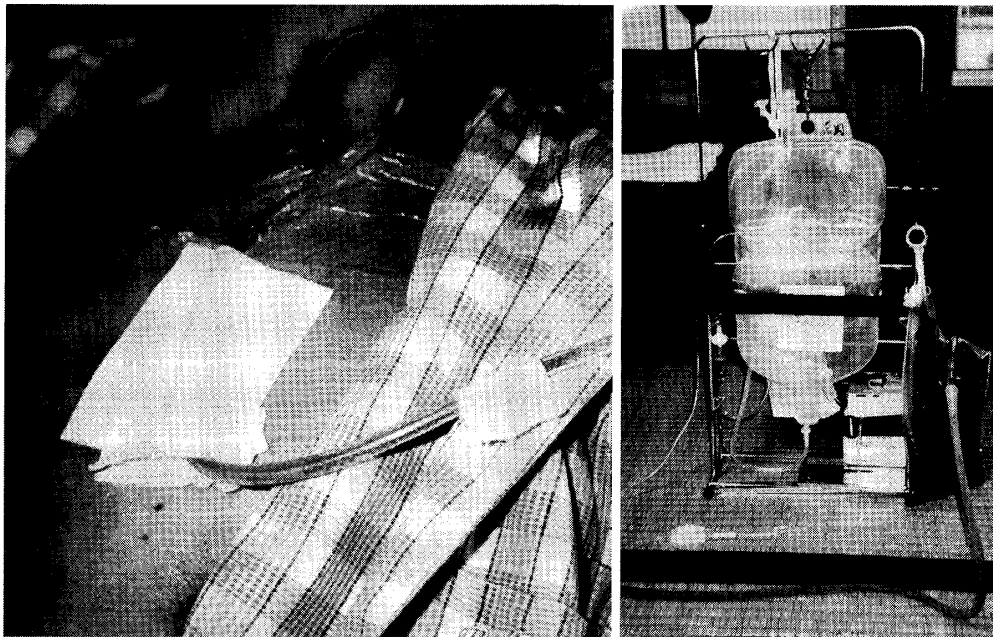


Fig. 3 Home-care maintenance

Discussion

This method of PTEG is based on a safe, simple and less invasive technique²¹⁾²²⁾. The uniqueness of this method is that it uses a balloon and ultrasonography to puncture the esophagus. Therefore any surgeon will be able to create an effective esophagostomy without any major complications²³⁾²⁴⁾. And then its maintenance is simple and easy. Because it does not need a particular instrument for immobilization, the indwelling catheter is taped to the patient's body. It only requires a couple of weeks to form a fistula. And anyone can exchange the PTEG indwelling catheter following a simple technique at the bed side. Therefore PTEG is just what we want for home care.

Conclusion

PTEG improved this patient's QOL at home for the long term. PTEG will no doubt become the standard method of gastric tubing for home care for feeding or drainage.

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経皮経食道胃管ドレナージ術 (PTEG-Drainage) で長期間 QOL の改善が得られた在宅医療の 1 治験例

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我々は 1994 年より経皮経食道胃管挿入術 (percutaneous trans-esophageal gastro-tubing; PTEG) を考案開発し、在宅医療に応用してきた。今回術後癌性腹膜炎の患者の腸管減圧に対し、PTEG を用いた在宅医療を試み、長期間の QOL の改善が得られたので報告する。

症例は 62 歳男性。1997 年 12 月 3 日下行結腸癌で左半結腸切除術 (D3) を施行した。病理診断は tub1, P₀ H₀ M₀ ss n₂ で stage IIIb であった。以後テガフルウラシル 450mg/day の内服で外来通院したが、腸閉塞を繰り返すため 1998 年 9 月 25 日再開腹手術で癒着剥離術を施行し、その際腹膜播種を確認した。以後徐々に経口摂取不良となり、1999 年 4 月 12 日在宅医療を目標として中心静脈カテーテルを留置して、在宅中心静脈栄養法 (HPN) を行っていたが、消化管通過障害による嘔吐頻回となり再入院となった。イレウス管を挿入留置することにより症状軽快したが、イレウス管による咽頭部痛が強いため抜去となった。患者の在宅医療への移行にあたり、腸管減圧目的の PEG の実施は癌性腹膜炎のため困難と判断して、5 月 26 日に PTEG を施行した。また疼痛管理はインフューザーを用いて塩酸モルヒネの持続投与を開始し、栄養管理は HPN により行うことで、PTEG 挿入後第 7 病日に退院となった。以後当院在宅医療支援・推進部との連携で在宅医療を続けていたが、全身状態が徐々に悪化し 10 月 18 日、PTEG 施行後第 145 病日に在宅死となった。PTEG 挿入留置中は明らかなチューブトラブルなどの合併症は認めず、鼻腔や咽頭の疼痛や違和感などを認めず自然な感覚で飲水が可能で、4 カ月以上に渡り著明な QOL の改善を在宅で得ることが可能であった。本法は末期癌患者の在宅医療において、非常に有効な治療手段の一つと考えられた。