

# OUTPATIENT PERCUTANEOUS RADIOLOGIC GASTROSTOMY IN PATIENTS WITH HEAD AND NECK CANCER: SINGLE-CENTER EXPERIENCE IN 35 CONSECUTIVE PATIENTS

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## OBJECTIVES

We performed a prospective phase II study to evaluate the technical success, safety and early complications of the percutaneous radiological gastrostomy technique (PRG) in outpatients with head and neck cancer (HNC).

## MATERIALS AND METHODS

Following board approvals, a prospective intervention study was conducted between March and October 2017. Informed consent was obtained from all patients. Thirty-five HNC patients referred for fluoroscopically guided feeding gastrostomy were included.

Inclusion criteria: Favorable clinical conditions (American Society of Anesthesiologist (ASA), physical status classification system < III and Karnofsky Performance Status > 70), acceptance of guidelines and post-procedure care, adequate social and family support, ease of access to the hospital. Exclusion criteria: Refusal to enter the study, coagulopathy, ascites, peritoneal carcinomatosis, intestinal occlusion or pseudo-occlusion, large hiatal hernia, previous gastric surgery. After the gastropexia using T-fastener sutures, a large bore tube 20Fr was inserted. Patients were discharged home after three hours of clinical observation. Clinical follow-up was performed to record any complications. Telephone contact was also used.

## MATERIALS AND METHODS

The complications were classified as major and minor as defined by the Society of Interventional Radiology classification system for complications by outcome (Table 1). Technical success rate was achieved in 100% of cases.

No haematoma or bleeding were found on the abdominal wall. No intercurrent occurred during the procedure. One patient (3%) died within 30 days due to hydroelectrolytic disturbance and cardiac arrhythmia. Short-term minor complications: pain (n = 6), peristomal leakage (n = 5), superficial skin infection (n = 1), tube dislodgment (n = 3) and gastroparesis (n = 5). All clinical complaints were conducted with non-invasive measures and symptomatic treatment. Tube dislodgments were successfully treated by replacing the tube for a new one through the same tract. One patient presented persistent leakage, superficial skin infection and responded to local treatment associated with oral antibiotic therapy.

Table 1. SIR classification system for complications by outcome.

Minor complications:
A. No therapy, no consequences.
B. Nominal therapy, no consequences; includes overnight admission for observation only.
Major complications:
C. Require therapy, minor hospitalization (<48h).
D. Require major therapy, unplanned increase in level of care, prolonged hospitalization (>48h).
E. Permanent adverse sequelae.
F. Death.

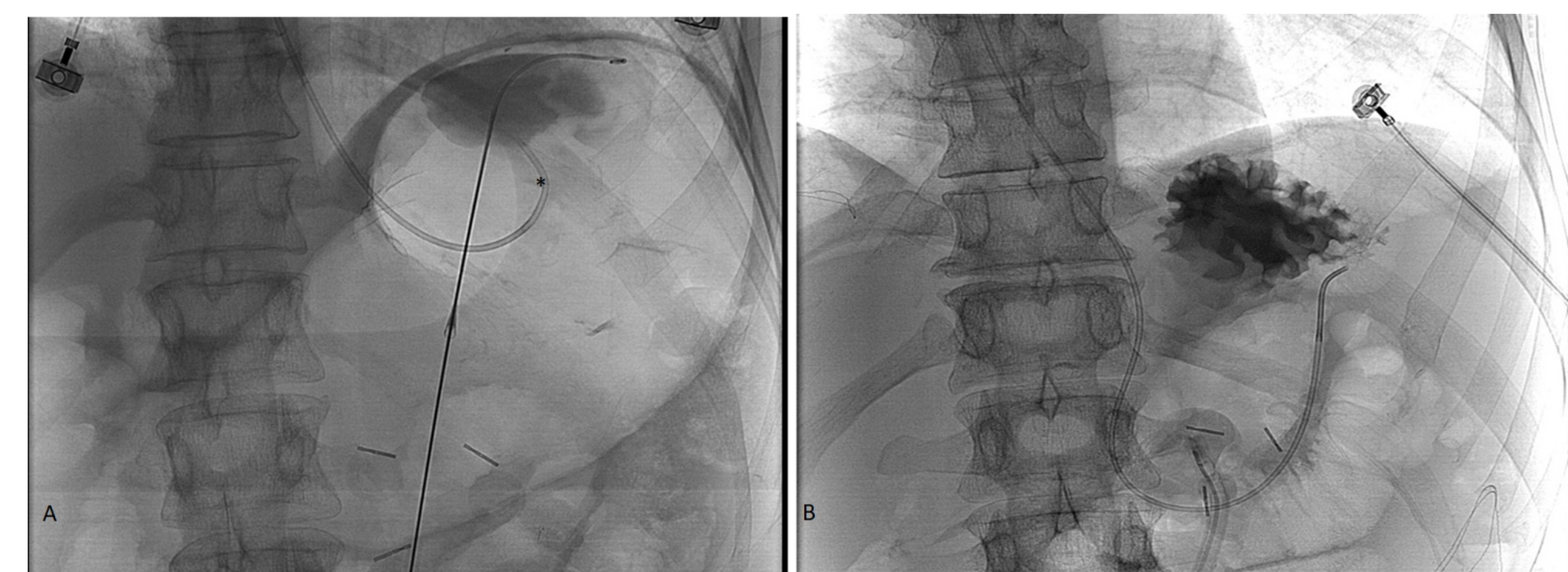


Fig. 1 Gastrostomy with usual technique. (A) Angiographic catheter inside the stomach (B) 20Fr tube inserted.

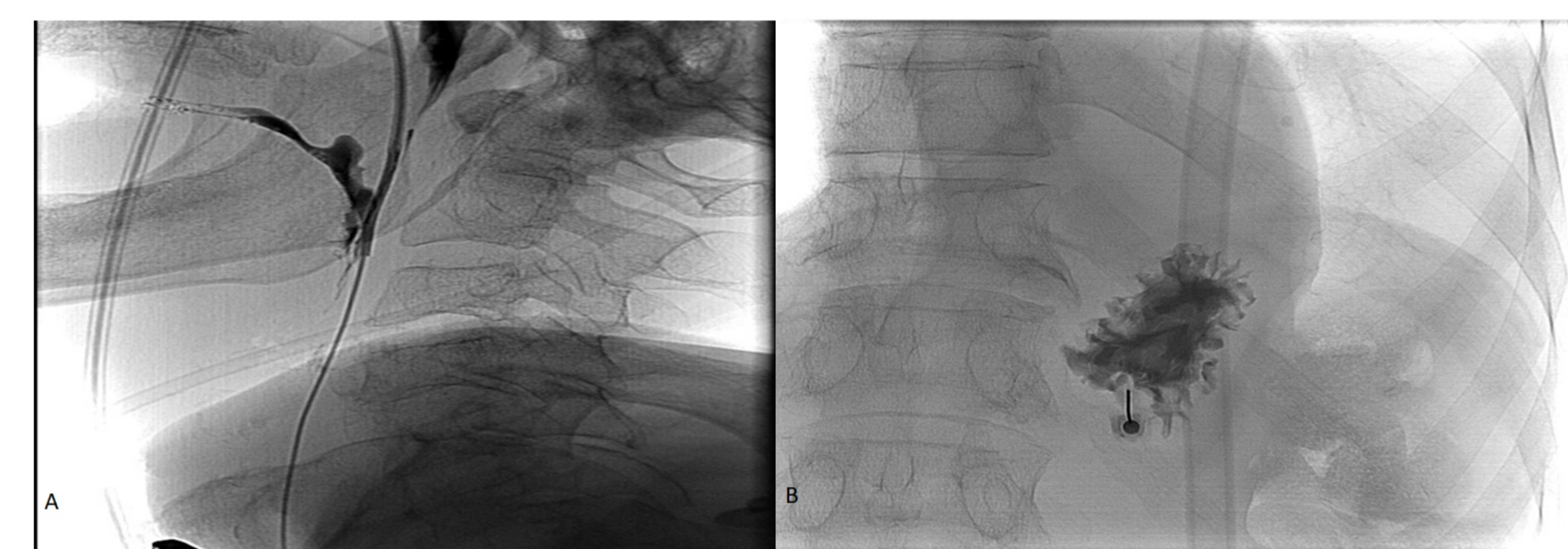


Fig. 2 Direct stomach access. (A) Oropharyngeal stricture blocking the angiographic catheter progression. (B) Gastric puncture was performed under ultrasonographic guidance.

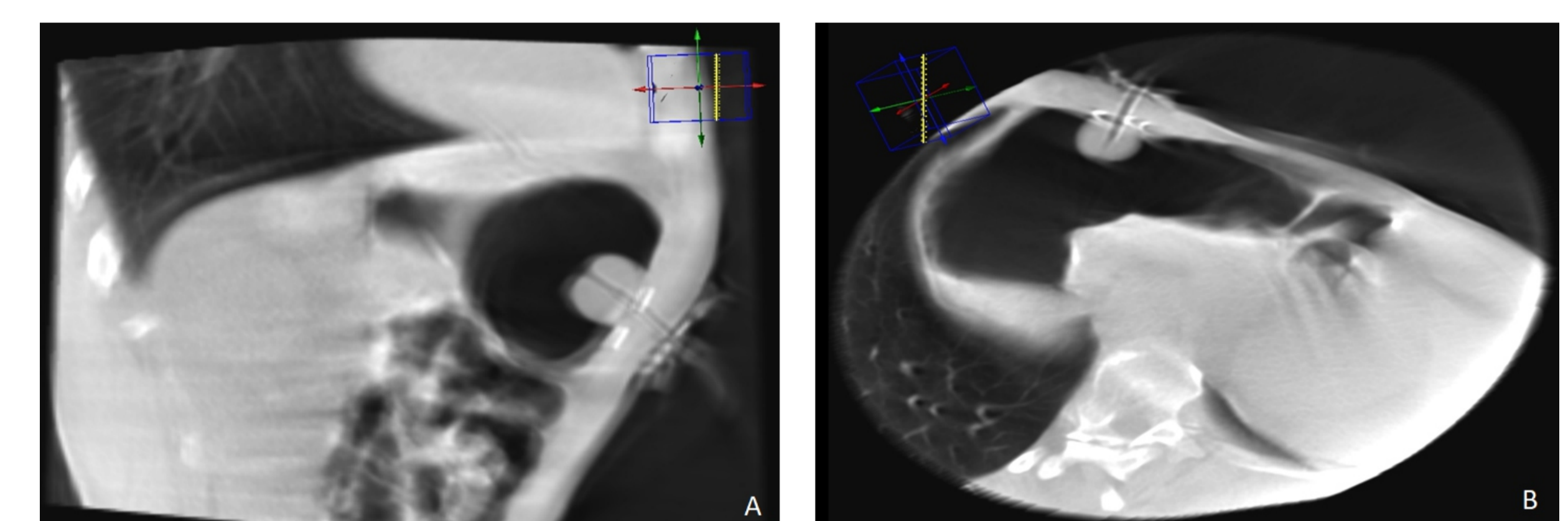


Fig. 3 (A/B) Multiplanar reconstruction using cone beam technique to confirm the final tube position. Sagittal (A) and axial (B) images.

## PERSPECTIVES AND CONCLUSION

In the present study, outpatient PRG was highly feasible in selected patients, with a technical success rate of 100%. It may be the technique of choice in patients with head and neck cancer given to the low risk of complications. The use of T-fasteners helps to reduce the complication rates and assists tube exchange and replacement. The short-term tolerability and efficacy are good, and tubes can be readily exchanged when necessary. In our series, outpatient procedures were safe and might potentially lead to decrease in the financial burden on healthcare.

Gastrostomy insertion in HNC patients may be challenging due to upper digestive tract stenosis. However, using a small-diameter catheter and a hydrophilic guide wire this obstacle can be surmounted.

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