



## Disc-retained tubes for radiologically inserted gastrostomy (RIG): Not up to the job?

N. Kibriya<sup>a,\*</sup>, L. Wilbraham<sup>b</sup>, D. Mullan<sup>a</sup>, P. Puro<sup>a</sup>, S. Vasileuskaya<sup>a</sup>, D.W. Edwards<sup>a</sup>, H.-U. Laasch<sup>a</sup>

<sup>a</sup>Department of Radiology, The Christie NHS Foundation Trust, Manchester M20 4BX, UK

<sup>b</sup>Department of Nutrition and Dietetics, The Christie NHS Foundation Trust, Manchester M20 4BX, UK

### ARTICLE INFORMATION

#### Article history:

Received 18 February 2013

Received in revised form

9 June 2013

Accepted 14 June 2013

**AIM:** To assess the insertion procedure and performance of disc-retained gastrostomy tubes, recording complications and accidental displacements by prospective audit, and to determine whether primary placement of the tube off-licence was feasible.

**MATERIALS AND METHODS:** Disc-retained 12 F single-lumen Monarch gastrostomy tubes (Enteral UK, Selby, UK) were inserted by three gastrointestinal interventional radiologists in a supra-regional cancer centre. The 12 F tubes required a 20 F peel-away sheath with four-point gastropexy fixation and were placed under conscious sedation, using electrocardiogram (ECG) bispectral index monitoring. Follow-up was performed in an in-house gastrostomy drop-in clinic at 1 week and 1 month, supplemented with weekly telephone follow-up. Patients also had open access to the gastrostomy drop-in clinic for immediate advice and complication management.

**RESULTS:** Eighteen patients underwent primary insertion of a Monarch gastrostomy tube over 5 months. A total of 6/18 (33%) tubes displaced; 4/18 (22%) completely, 2/18 (11%) occluded into the peritoneum. Four of 18 (22%) patients developed infection at the stoma site. Due to the unexpectedly poor performance of the tube, the study was terminated early.

**CONCLUSION:** Initial experience with the Monarch disc-retained gastrostomy tube demonstrates it unsuitable for primary placement with current protocols. In view of the potentially serious complications, the Medicines and Healthcare Products Regulatory Agency (MHRA) has been informed. A request has been made to the distributor to reassess the tube design and/or review the procedure promoted for primary placement.

© 2013 The Royal College of Radiologists. Published by Elsevier Ltd. All rights reserved.

### Introduction

Tube feeding through percutaneous gastrostomy tubes is a well-established means of nutritional support. Feeding tubes can be placed into the stomach via a “pull” or “push”

technique, with fluoroscopic or endoscopic guidance.<sup>1</sup> In patients with mechanical dysphagia from oropharyngeal or oesophageal cancer, endoscopy is often impossible. In addition, antegrade placement via endoscopy, or antegrade per-oral image-guided gastrostomy (PIG) both have a small but documented risk of implantation metastasis into the stoma site.<sup>2–5</sup>

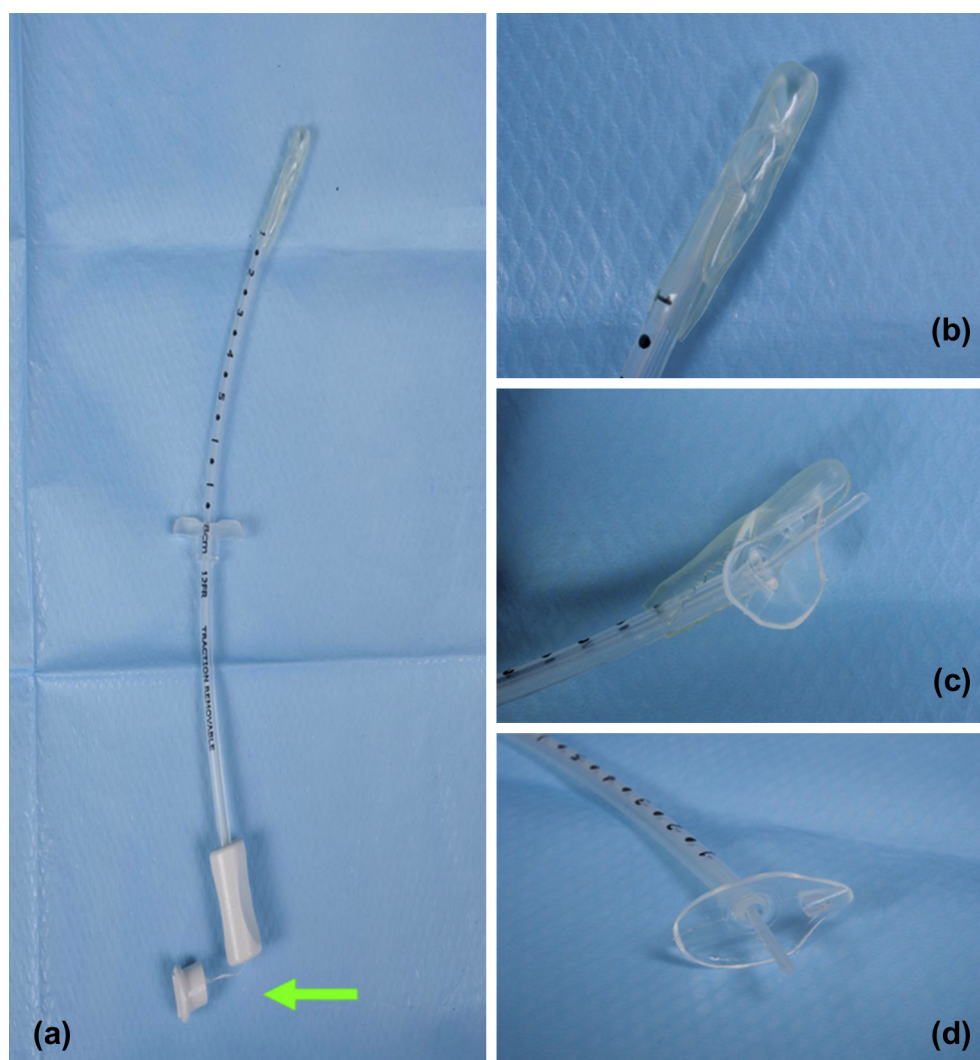
A recent national survey identified a wide range in practice and a lack of consensus on current best practice,<sup>6</sup> and shows that the commonest tubes used for radiologically inserted gastrostomy (RIG) are balloon-retained replacement tubes.

\* Guarantor and correspondent: N. Kibriya, Radiology Department, The Christie NHS Foundation Trust, Wilmslow Road, Manchester M20 4BX, UK.  
E-mail address: [nabskib@yahoo.co.uk](mailto:nabskib@yahoo.co.uk) (N. Kibriya).

These were originally designed for secondary placement into mature stomata, but for many years have been widely used for direct percutaneous insertion and are now approved for primary placement. The disadvantage of this type of tube is the relatively small internal lumen, which is reduced due to the requirement for a balloon channel within the tube as well as the inherently thicker silicon wall. In practice, these tubes require a high degree of maintenance. Most manufacturers suggest changing the tube every 3 months due to the risk of failure of the retention balloon. Furthermore the water in the balloon requires changing on a weekly basis in order to compensate for insipient volume loss through osmosis. In addition, balloon tubes are relatively expensive to manufacture and can cause significant discomfort on exchange as the soft material of the silicon balloon concertinas to form a collar, which increases resistance to passage of the tube through the track in the abdominal wall. Mechanically retained gastrostomy tubes require lower maintenance, but current designs are beset by their own limitations: Wills–Oglesby type tubes with a locking pigtail have a higher incidence of tube occlusion

and displacement,<sup>6</sup> whereas collapsible anchors, such as the EntriStar (Covidien, Mansfield, MA, USA) require excessive oversizing of the tract for insertion and make exchanges very difficult.

Recently a new tube has been increasingly used off-lence for primary placement, which utilizes a silicon disc as a retention mechanism and obviates the on-going maintenance required with balloon tubes. The silicon retention disc is folded and encapsulated in gelatine prior to placement. Once the gastrostomy tube is *in situ*, the gelatine seal is broken by traction on a coaxial deployment suture. This releases the encapsulated disc and the residual gelatine dissolves in the acidic conditions, leaving the silicon disc as a low maintenance retention bumper (Fig 1). Although this disc-retained tube has a greater initial cost (approximately £50 greater than a standard balloon gastrostomy), avoiding routine water changes and routine tube changes confers a potential long-term economic benefit by avoiding weekly district nurse visits, which is estimated to cost approximately £40 per visit [£78 hourly rate, Personal Social



**Figure 1** Disc-retained Monarch gastrostomy tube before (a, b), during (c) and after splitting the gelatine capsule releasing the retention disc (d). Green arrow indicates the coaxial deployment suture, which requires traction to deploy the retention disc.

Download English Version:

<https://daneshyari.com/en/article/6191016>

Download Persian Version:

<https://daneshyari.com/article/6191016>

[Daneshyari.com](https://daneshyari.com)