CASE REPORT

A simple technique for intubating the mouth during OGD in patients with previous neck radiation

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Accepted 25 April 2014

SUMMARY

Trismus and microstomia are commonly associated complications of neck irradiation. In recent years we are seeing an increase in the number of patients with various head and neck cancers being treated with radiotherapy. This can pose a significant challenge in performing oesophagogastrroduodenoscopy (OGD) in this cohort of patients. We describe a novel technique for intubating the mouth during OGD in patients with previous neck radiation. Instead of placing a standard mouthpiece, we place the barrel of a 5 mm syringe, which is cut in half, into the patient's mouth. This method allows easy passage of the gastroscope, where the mouth opening is limited by trismus from prior radiation. It also serves to protect the patient's teeth during OGD. Successful intubation with a gastroscope is possible in patients with severe trismus using our novel technique.

BACKGROUND

Several studies have documented trismus and microstomia following neck irradiation used for various head and neck cancers.^{1 2} Problems can occur in over 50% of patients who receive such therapy.³ This can pose a challenge when performing oesophagogastrroduodenoscopy (OGD). In our institution, the departments of otolaryngology and head and neck surgery treat approximately 25–30% of all the head and neck cancers in Ireland. When these patients require OGD, trismus and microstomia can cause difficulty in intubating the mouth and oesophagus with a gastroscope. We traditionally place a mouthpiece (figure 1) into the patient's mouth when performing an OGD in order to allow intubation of the oesophagus and to protect the patient's teeth. Owing to the complications of microstomia and trismus, many of these patients are unable to place a standard mouthpiece in their mouth. We describe a technique for performing an OGD in this group of patients.

Figure 1 Standard mouthpiece.

Figure 2 Standard mouthpiece compared with 5 mm syringe.

CASE PRESENTATION

A 66-year-old man presented to the general surgical clinic with severe epigastric pain associated with reflux symptoms which was partly relieved by eating. He had no related nausea, vomiting or lower gastrointestinal symptoms. He had a history of laryngeal cancer (T2N0M0) treated with radiotherapy alone. This was complicated by trismus. OGD was planned in an elective setting but was anticipated to be difficult due to his associated trismus.

INVESTIGATIONS

After consenting to treatment, the patient was taken to the endoscopy suite. As he had severe trismus, we were unable to place a standard mouthpiece; therefore, we placed a 5 mm syringe which was cut in half into his mouth (figure 2). We used only the barrel of the syringe and removed the plunger (figure 3). Once the cylindrical barrel of

Figure 3 Alternative mouthpiece using a cut syringe barrel.

To cite: Buckley CE, Achakzai AA, O'Hanlon D. *BMJ Case Rep* Published online: [please include Day Month Year] doi:10.1136/bcr-2014-203778

Figure 4 Passage of gastroscope through 5 mm syringe.

the cut syringe was placed, we administered 4 mg of intravenous midazolam to the patient.

OUTCOME AND FOLLOW-UP

We were able to successfully pass the gastroscope through the syringe and intubated the oesophagus (figure 4). This allowed us to perform the procedure and take biopsies as per our normal protocol. The patient had no procedural complications. He was CLO positive and was treated appropriately with triple therapy.

DISCUSSION

A novel technique was described for performing OGD in the setting of trismus from previous neck radiation. Owing to the increasing numbers of patients with head and neck cancer being treated with radiotherapy, we are seeing more radiation-associated complications such as trismus and microstomia. This poses difficulty in performing OGD in this group of patients. We have successfully described a novel technique for intubating patients with a gastroscope who have limited mouth opening from previous neck irradiation.

Learning points

- ▶ Oesophagogastroduodenoscopy can be difficult in patients who have had previous irradiation for head and neck cancer.
- ▶ We describe a novel technique for intubating the mouth and oesophagus with a gastroscope.

Contributors All the authors met the following three criteria: (1) conception and design, acquisition of the data or analysis and interpretation of the data, (2) drafting the article or revising it critically for important intellectual content and (3) final approval of the version published.

Competing interests None.

Patient consent Obtained.

Provenance and peer review Not commissioned; externally peer reviewed.

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