5. Inadvertent removal of a gastrostomy tube or device

Important considerations

Immature stoma tract (i.e. less than six weeks since insertion)

- If the tract is immature time is of the essence. Patients should be encouraged to present to the emergency department as soon as possible.
- If the gastrostomy tube or device is accidentally pulled and/or partial displacement of the internal bumper is suspected in an immature stoma tract the patient should present to the emergency department. A radiological contrast study or endoscopy should be performed. If displacement is confirmed the device will need to be removed (as per recommendations in Planned replacement of gastrostomy tubes and devices – page 57) and replaced with the appropriate gastrostomy tube or device.[16, 20, 22, 26, 69, 150-155] (GRADE D)
- If it is known that the stomach was securely sutured to the anterior abdominal wall during laparoscopic surgery the risk of gastric wall separation and tract disruption is reduced when the initial device is removed and on replacing balloon gastrostomy devices.[156-158] After consultation with the responsible surgeon it may be agreed that a suitably trained clinician can replace the device without the need for endoscopy.

> **!** NOTE: if the time between insertion and inadvertent removal is greater than 6 weeks but less than 12 weeks, consider radiological intervention.

Mature stoma tract

- If the gastrostomy tube or device has been accidently removed the priority is to preserve the tract by replacing the tube or device as soon as possible (ideally within two hours) and securing with tape.[2]
- Determine the size and type of the previous tube or device and obtain a new tube or device.
- A dedicated gastrostomy tube or device is the device of choice for gastrostomy access because:
  - It will have dedicated feeding, flushing and medication ports
  - It will have proximal end hinged caps
  - It will have an external flange to prevent device migration
  - Tube length (distal tip to base of the y-port) is usually less than 20cm
  - The distal end is open and reduces the probable risk of device obstruction
  - Most have a recessed distal tip, to reduce probable ulceration of the posterior gastric mucosa
- If a dedicated gastrostomy device is not available a Foley catheter can be used for this purpose as a **temporary** measure to protect the tract.[16, 20, 22, 26, 69, 150-155] (GRADE D)
  - A Foley catheter of equivalent size that is adequately secured can be used in the interim for medication or feeding but should be **replaced with a dedicated gastrostomy tube or device as soon as possible.**
- Foley catheters are not recommended as a long term replacement feeding tube or device because:
  - They do not have an external flange increasing the risk of migration and obstruction and are not designed as a long term gastrostomy device [16, 20, 22, 26, 69, 150-155] (GRADE D)
  - A "spigot" or stopper is required to cap off the proximal end when not in use and it may be at risk of being lost or being unavailable
  - Standard tube length is 40cm – outlet obstruction becomes a risk if the tube is allowed to migrate in (see the point above)
  - Their closed distal end causes the tube to be at risk of obstruction
  - There is increased risk of posterior gastric mucosa ulceration due to exposed distal tube past the balloon
  - The manufacturer's guidelines are for urinary bladder insertion.

"We had no replacement tube – we had a terrible 3 days where we had to use a catheter tube and watch stomach contents leak and burn her skin"

Carer

- A balloon gastrostomy tube or device that has been pulled out or fallen out can be replaced before the stoma closes.
    - If possible, the tube or device selected should be the same diameter as the one previously inserted.
    - If resistance is felt when trying to insert the tube or device then consideration should be given to preserving the tract by using a tube or device with a smaller diameter as the first priority and secondly reinserting a functional gastrostomy tube or device. This avoids the need for further surgical intervention, including endoscopy. [16, 20, 22, 26, 69, 150-155] (GRADE D)
- Low profile replacement gastrostomy devices should be considered in patients who are at high risk of inadvertent device dislodgement or who have an active lifestyle. [16, 20, 22, 26, 69, 150-155] (GRADE D)

There is no evidence to support recommendations for the bedside confirmation of partially dislodged tubes or devices that require replacement (in mature tracts). The following checks should be undertaken by a trained health professional to confirm if the tube or device is dislodged:

- Ballooned tubes or devices - check if the balloon is intact by aspirating the balloon contents
- Non-skin level devices - confirm the current external markings with the usual position
- Rotate the tube or device and perform "in-out play" to ensure no resistance.

If the position of the tube or device is still unclear a radiological contrast study or endoscopy should be arranged.[2]

NOTE:

- Changing a gastrostomy tube or device at the bedside or in a clinic/home setting should only be performed by individuals who have adequate skills and training.
- If inadvertant removal of a gastrostomy tube or device occurs frequently, the patient should be assessed to determine if the device is the most suitable type and/or if ongoing gastrostomy feeding is appropriate.

The algorithm below describes the actions that should be taken if a device is inadvertently removed from a mature tract. The type of the tube/device should be carefully checked.