British Cardiovascular Society

British Cardiovascular Society update on
NHS Improvement Patient Safety Alert: Nasogastric tube misplacement: continuing risk of death and severe harm

Specific concerns in patients who have suffered a cardiac arrest

Background
The risk of severe harm and death associated with administration of drugs or feed via misplaced nasogastric tubes (NGTs) is established. All NHS Trusts should have now adopted the recommendations from the NHS Improvement Patient Safety Alert: https://improvement.nhs.uk/news-alerts/nasogastric-tube-misplacement-continuing-risk-of-death-severe-harm/ which streamlined the requirements of previous safety alerts.

Preventing harm
Preventing harm from NGT use is based on confirming correct tube placement. This is established by pH testing of NGT aspirate and, when necessary, x-ray imaging. All NHS Trusts should have clear policies on this.

On-going risk relevant to cardiology practice

Never Events have continued to occur due to misplaced NGTs being used, specifically in patients who have suffered a cardiac arrest. These incidents occurred because standard processes of checking NGT placement were not followed. The specific risk relates to medical staff declaring that a NGT is correctly placed, sometimes related to incorrect interpretation of the CXR, especially where they have not been taught and achieved competency in the 'four criteria' for confirming placement. There is also a risk related to inadequate documentation.

Patients who have suffered a cardiac arrest may be located in the emergency department, on a general ward or in a cath lab. Staff attending in these situations may not have received competency-based training for NGT position confirmation. In the past, medical staff have not followed local guidelines in these emergency situations, because of the desire to administer emergency drug therapy such as dual anti-platelet therapy (DAPT). There is also a risk medical staff may try to confirm the position of the NGTs in cath labs with fluoroscopy rather than formal CXR.

Recommendation
- National guidance and local Trust policy should always be followed before use of a NGT
- If anaesthetic colleagues insert NGT and cannot confirm position with a pH within the 'safe range', the NGT should not be used for DAPT until confirmed by CXR interpretation by a trained individual
- Fluoroscopy should not be used to confirm NGT position
- If a trained and competent individual is not available to confirm correct placement of the NGT (either by pH or CXR) then the NGT should not be used to administer drugs
- Emergency room or cath lab staff may not have the competencies or experience to confirm NGT placement and should therefore not be expected to undertake this assessment, unless they have received appropriate training.
- In patients requiring emergency angioplasty, if the correct position of a NGT cannot be confirmed (either by pH or CXR) alternative therapeutic options to DAPT should be considered (see below).

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Alternative strategies if administration of DAPT via NGT is likely to be delayed in patients having an emergency PCI procedure

In the context of an emergency PCI procedure (such as primary PCI for ST-elevation myocardial infarction) alternative strategies to deliver anti-platelet therapy should be considered and local guidance must be developed with local pharmacy involvement. As gastric absorption of drugs is reduced after cardiac arrest developing alternative anti-platelet strategies is not unreasonable, especially if there is likely to be a delay in NGT position confirmation. Outside of an emergency PCI procedure these alternative strategies are not required.

Potential alternative therapeutic strategies:

- Aspirin can be administered intravenous or per rectum
- Intravenous glycoprotein IIb/IIIa inhibitor bolus and infusion can be given until DAPT can be safely administered
- Intravenous cangrelor could also be considered although this therapy is not widely available within the NHS

For additional information please refer to NHS Improvement safety alert and associated resource set

- https://improvement.nhs.uk/news-alerts/nasogastric-tube-misplacement-continuing-risk-of-death-severe-harm/
- https://improvement.nhs.uk/resources/resource-set-initial-placement-checks-nasogastric-and-orogastric-tubes/