Mouth care case study – Acute stroke

Patient background

- 40-year-old woman who was admitted to the hyper-acute stroke unit (HASU) with a brain stem stroke. She presented with severe dysarthria and dysphagia.
- She required full assistance for mobility and full nursing care; a level 3 chair for seating and could tolerate sitting for 1 hour at a time; and supplementary oxygen and regular suction in the early days.

Speech and language therapy input into patient's mouth care

- The patient had significantly reduced oromotor movements, including reduced sensory awareness CN V and CNV11. Lingual movements were reduced in range, accuracy and speed of movement CNX11. Lip seal was very weak CNV11. Protective mechanisms including voice quality and cough, were both weak CNX.
- She was able to tolerate 10 teaspoons of level 3 liquids and level 4 diet at any one time. She required very slow feeding and a 5ml bolus.
- Oral stage swallow was prolonged and slow. Anterior-posterior manipulation of the bolus was effortful. Poor oral containment resulted in anterior escape and reduced awareness of same. Pocketing in left lateral sulci resulted following a weak swallow with a reduction sensory awareness of residue.
- Pharyngeally, her swallow was delayed, hyolaryngeal excursion was weak and strength of swallow was reduced. Pharyngeal residue resulted post swallow and increased in quantity with subsequent swallows.
- Clear signs of aspiration were evident with level 0, 1 and 2 liquids. Swallow endurance was poor and fatigue resulted with increased aspiration risk.
- Oral assessment revealed:
  1. White coating on tongue thrush-candidiasis
  2. Dry mouth-xerostomia
  3. Cracked corners of mouth-angular cheilitis
  4. Diffuse oral residue post eating along tongue
  5. Pocketing of food in left sulci
- Pink sponges were replaced for a small headed bristled tooth brush and non-foaming toothpaste which is more effective in removing food debris. In addition, there was a risk of the pink sponge being detached as she tended to want to suck and pull on it.
- Suction toothbrushes were provided initially to mitigate for possible aspiration.

- Oral candidiasis was highlighted to the medical team who prescribed Nystatin.
- Cracked and dried corners of mouth which resulted secondary to O2, period of nil by mouth (NBM) and restricted oral intake was managed by non-petroleum based products for lips and applied regularly throughout the day.
- Main speech and language therapy input was regarding frequency with which oral care was provided. The patient's mouth was dry and required regular lubrication using gel-based products (x4 daily).
- Oral hygiene was provided before and after daily swallow treatment. This consisted of a smear of non-foaming toothpaste on a small bristled toothbrush and or suction toothbrush. It was provided before and after all oral intake. The aim was to provide oral hygiene 5 times per day. This was discussed with the multidisciplinary team (MDT) including nursing, occupational therapists (OT), physiotherapists and medics.
- The frequency of oral hygiene provision aimed to:
  - Reduce build-up of bacteria in the oral cavity which was at risk of being aspirated
  - Remove food debris post swallow and reduce potential aspiration risk on this residue
  - To help to improve sensory awareness of the food debris and to promote self clearance
  - To aid with oral lubrication and to help prevent dry mouth.

Outcomes

- The patient's oral hygiene improved and with this her quality of life improved. She did not develop any respiratory/chest infections.
- With time, her sensory awareness of oral residue improved and she was able largely to self-clear this. She continued to require assistance for feeding and oral hygiene.
- Oral hygiene documentation ensured that oral care provision was provided on a regular basis.

Learnings

- Oral hygiene provision is patient specific and dosage should reflect patients' needs. Patients who are independent and mildly dysphagic may require less oral care than someone who is dependent and on diet modification.
- Oral hygiene can form an integral component of a dysphagia rehabilitation programme.
- Oral hygiene provision should always be recorded for monitoring and audit purposes.
- Oral hygiene provision should be multidisciplinary though the aims and goals may be different for each professional.
- The MDT have an increased awareness of the risk of using pink sponges and now only use soft small headed toothbrushes for oral care on the stroke unit.