Managing Elderly Patients with Feeding Problems

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Content

- Revision on normal swallowing process
- Swallowing with aging
- Problems and risks of feeding in elders
- Etiology of dysphagia
- Dysphagia assessment
- Nursing interventions
Normal swallow - Four phases

- Oral preparatory phase
- Oral propulsive phase
- Pharyngeal phase
- Esophageal phase
Swallowing changes in normal aging

- Decrease in strength & tension of muscles, inadequate saliva and loss of dentition
- Slower oral manipulation and transit
- Reduced bitter force
- Extra tongue effort and motion
- Longer oral stage
Swallowing changes in normal aging

- Delay onset of pharyngeal swallow
- ↓ strength of pharyngeal contraction
- ↑ frequency and extend of pharyngeal residue
- ↓ ability to create +ve pressure of the oropharyngeal pump
- ↑ throat clearing and cough
- Esophageal peristalsis may be weakened and reflux resulting in more frequent heartburn
Swallowing changes in normal aging

- **Sensory Changes:**

  Taste detection and recognition thresholds increase. This is primarily due to decrease in number of taste buds and changes in olfaction.
Factors Contributed to Feeding Problems

- Aged related motor function degeneration
- Degenerative sensory changes e.g. blindness, deaf and taste
- Dehydration
- Physical illnesses e.g. Stroke, Parkinson’s Disease
- Dysphagia
- Cognitive Impairment: dementia
- Psychosocial conditions: social isolation, depression, refused to eat, loss of appetite etc.
- Medications: sedatives, affect central nervous system suppress swallowing reflex
Aspiration

- The misdirection of oropharyngeal secretions or gastric contents into the larynx and lower respiratory tract.

- Common in older elderly adults with dysphagia and can lead to aspiration pneumonia.

- Dysphagia carries a sevenfold increased risk of aspiration pneumonia
Silent Aspiration

- Small volume aspiration that produce no overt symptoms are common and are often not discovered until the condition progresses to aspiration pneumonia
Dysphagia

- Problem occur when food or drinks traveled from mouth to stomach

- Common in persons with neurological diseases as stroke, Parkinson's diseases and dementia. Older adults with any of these condition is at greater risk for aspiration because the dysphagia is superimposed on the slowed swallowing rate associated with normal aging

- Conditions that suppress the cough reflex eg. sedation, further increase the risk for aspiration
Risk of Pneumonia in Patients who Aspirate

- ↑ oropharyngeal colonization with pathogens → aspiration pneumonia
- ↓ salivary clearance and poor oral hygiene may be major risk factor
- ↓ immune system and changes in lung function occurs with aging
- Poor nutritional status → profound effect on the immune system
Signs and Symptoms (I)

- Choking, weak cough reflex
- Cough before, during or after swallow
- Drooling or cannot tolerate oral secretion
- Pocking of food in cheeks
- Tongue thrust
- Head extension during swallowing
- Slow to initiate and effortful swallow
- Multiple swallow for each mouthful
- Complaint of food sticking in throat
- Oral or nasal regurgitation of food/fluid
Signs and Symptoms (II)

- Loss of voice or breathing voice
- Change of color
- Lots of sputum
- Prolonged mealtime
- On & off low grade fever
- Weight loss
- Repeated pneumonia
- Refuse oral feeding
Signs and Symptoms (III)

- Older person with pneumonia often complain of fewer significant than their younger counterparts.

- Delirium may be the only manifestation of pneumonia in elders.

- An elevated respiratory rate is often an early clue.
Assessments

- Dietary / fluid intake
- Ability to eat
- Appetite: (pain, GI problems, infection, oral sore, denture etc.)
- Direct testing:
  - Water Swallowing Test
  - Videofluoroscopic Study of Swallowing (VFSS)
  - Fiberoptic Endoscopic Examination of Swallowing (FEES)
Goals for Managing Dysphagia

- Maintain adequate nutrition
- Ensure adequate hydration
- Prevent aspiration pneumonia and suffocation
- Optimize quality of life
Prevention of Aspiration during Hand Feeding

- There is little research-based data regarding specific strategies
- Provide 30-minute rest prior feeding
- Sit upright or elevate bedrest 90-degree
- Slightly flexing head to achieve “chin down”
- Alternate solid and liquid boluses
- Vary placement of food in the month
- Determine the food viscosity
- Minimize the use of sedatives and hypnotics
- The use of cueing, environment modification and minimizing distraction
Prevention of Aspiration during Tube Feeding

- Persons who aspirate are also likely to aspirate tube feeding
- Elevate bedrest at least 30-degree during continuous feeding
- Ask the tube-fed person, if possible, for the presence fullness or nausea (signs of slowed gastric emptying)
- Measure gastric residual volumes every 4 - 6hrs or before each intermittent feeding
- Raise concern if persistent too much residual volumes (> 200ml)
- Pump assisted feeding may be associated with fewer aspiration than gravity controlled-feeding
Some tips for Reducing Eating and Feeding Difficulties

- Arrange tray to facilitate self-feeding
- Provide finger foods if patient experiences difficulty managing eating utensil
- Use verbal cueing and prompting to encourage self-feeding e.g. take a bite, chew, swallow, cough
- Staff feeding patient should be at eye level and interact socially, keeping the focus of conversation on the meal
- Involving families in feeding and preparing favorite food
- Training and mentoring of staff
Food to Avoid

- Products that melt to a thin liquid in the mouth or slippery
- Dry crumbly foods
- Particulate foods
- Bread products
- Sticky foods
- Foods of mixed texture
- Food with seeds
Why are tubes inserted?

**Tube feeding death spiral**

(David Weissman)

Hospitalisation eg UTI with past dementia, CVA

Poor intake, dysphagia, weight loss

Swallow assessment, ST, VFSS

Recommend non-oral feeding

**Tube inserted**

Patient agitated, pulls out tube, needs restrainer

Family conflict with staff

Aspiration pneumonia / IV antibiotics

Family conference

Death
Feeding Tubes or Enteral Nutrition

Myths and Facts
Interviewed 173 treating physicians to describe their expectation of benefit for 280 patients receiving a new feeding tube, (response rate, 97%).

In half or more cases, physicians expected benefits of improved nutrition (93%), hydration (60%), prolonged life (58%), ease providing medication (55%), and less aspiration risk (49%).

Physicians may be unaware of evidence, or expect more optimistic outcomes for their specific patient population.
Myth I: Feeding tubes prevent lung infections (aspiration pneumonia) that are caused by inhaling food, water or saliva into the lungs.

- Fact: An older adult who has trouble swallowing may inhale his own saliva into his lungs. A feeding tube will NOT prevent this type of aspiration.
Prospective study to compare the incidence of aspiration pneumonia and death in patients with dysphagia who were either fed orally or through a nasogastric tube feeding.

Patients diagnosed with dysphagia by the speech therapist were recommended to have either oral feeding with modified diet or nasogastric tube feeding.

The rate of aspiration pneumonia and death were, respectively, 31.2 percent in nasogastric tube-fed patients and 10.3 percent in orally-fed patients.

Patients on nasogastric tube feeding did not have a better outcome against aspiration pneumonia and mortality.
There are no randomized trials comparing the chances of aspiration in patients with and without feeding tubes.

Non randomized trials, comparing patients with or without feeding tubes show that patients with tubes are more likely to be aspirators.

It is clear from several case series that putting in a feeding tube will not necessarily stop a patient from aspirating. More than half of patients in these studies who aspirated before they were given a tube, still aspirated after they were given a tube. On average, 16 out of 100 patients with a feeding tube will aspirate.
Myth 2: Tube feedings prolongs life in most elderly patients.

Fact: Although some patients benefit from enteral feeding, most elderly have chronic conditions that make feeding tubes less effective. Studies have shown that 25%, of older adults who have a feeding tube inserted will die during the same hospitalization from their underlying illness. 50% die within 6 months.
There are no randomized trials comparing similar patients with and without feeding tubes to see who lived longer.

Non-randomized trails in nursing homes have found that tube fed patients do not live longer than similar patients without feeding tubes.

It is difficult to predict how long your patient would live with or without a tube. Case series of patients with feeding tubes have shown that those with the following characteristics have a shorter survival: very old patients (over 85 years), patients who tend to aspirate, patients who are already very undernourished, and patients with a previous diagnosis of malignancy.
**Myth 3:** A person will suffer from starving to death unless given a feeding tube with food and water.

- Not wanting to eat or drink is part of the natural dying process in older adults. In some patients with progressive or terminal illnesses like malignancy, Alzheimer’s disease or heart failure, the decreased appetite and urge to drink can be a signal that the end of life is near.

- In these advanced stages of illness, people do not complain of hunger or thirst. Feeding tubes and tube feedings may only temporarily prolong the natural dying process in these patients.
Myth 4: Dying from dehydration causes suffering.

- Older adults who suffer from an advanced disease such as cancer, Parkinson’s or Alzheimer’s may not feel hungry or thirsty.

- Interviews with patients dying from cancer confirm that dehydration does not produce pain or other discomfort.

- Dehydration makes people sleep more and they report feeling tired. Dehydration does cause a dry mouth, but people can be kept comfortable with ice chips, sips of fluids, mouth swabs and other comfort measures.

- In several medical conditions, increased fluids from tube feedings can actually create discomfort for the patient.
Myth 5: Chinese cultural beliefs and relatives demands requires the use of a feeding tube

- Tube feeding should be recommended by the medical team only when the benefits are greater than the burdens.

- If the patient is mentally competent or has appointed decision-maker, his consent is necessary before starting tube feeding.
Myth 6: Once tube feeding is started, if cannot be stopped.

- Mentally competent elderly or decision-maker, who chose to use tube feedings on a trial basis, can request to stop tube feeding, if they feel that the tube feeding are not beneficial. This should be discussed with medical team.
Myth 7: PEG tube feeding is better than RT feeding

- There is no evidence that PEG is superior to RT in preventing aspiration pneumonia.

- Selected persons may prefer the comfort and cosmetic benefits of PEG.
Searched MEDLINE, 1966 through March 1999, to identify data about whether tube feeding in patients with advanced dementia can prevent aspiration pneumonia, prolong survival, reduce the risk of pressure sores or infections, improve function, or provide palliation.

Found no data to suggest that tube feeding improves any of these clinically important outcomes and some data to suggest that it does not.
There is insufficient evidence to suggest that enteral tube feeding is beneficial in patients with advanced dementia. Data are lacking on the adverse effects of this intervention.

We found no conclusive evidence that enteral tube nutrition is effective in terms of prolonging survival, improving quality of life, or leading to better nourishment or decreasing the risk of pressure sores.
Improving Care for Elderly with Feeding Problems and Ethical Dilemmas with an Interdisciplinary “Choices for FEED” Program

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RHTSK
Background information:

- Constantly 1/2 to 2/3 patient in extended care and infirmary settings receiving feeding tube in HK
- Prevalence 7 – 30 % in the elderly
- Conflicts between healthcare professionals and clients concerning tube feeding
- Concept of palliative care in the elderly
Objectives:

- To improve the decision making process for tube-feeding by patients, care-givers and healthcare professionals.

- Improve documentation and communication in the care pathway.

- To enhance caregivers’ knowledge and attitude towards tube-feeding.

- To reduce the number of tube-feeding.

- Provide adequate information for discharge.
Objectives: (Con't)

- Using multidisciplinary integrated care model for management patients with feeding problems, to reduce inappropriate tube feeding by improving staff and care-giver education and to facilitate discharge planning making process for tube-feeding by patients, care-givers and healthcare professionals.
Strategies

- **Management guidelines**

- **Staff education** – Change of concept, knowledge, feeding and assessment skills

- **Patient empowerment** – information booklets, freedom of choice
Results:

- Over 3 months in 2009, the program registry included 140 newly initiated and 76 existing tube feeding elderly respectively.

- 3 out of 76 existing tube-feed elderly able to resume oral feeding on discharge.
50 (35.7%) of new cases were successfully discharged on oral feeding. Another 4 (3%) were fed orally, supplemented with tube feeding and 25 (18.6%) patients starting tube feeding died before discharge.
Attitude and knowledge questionnaire by 142 different staff disciplines revealed marked discrepancies in willingness to accept tube feeding for own self.

Staff Attitudes towards Tube Feeding for Their Own Self

<table>
<thead>
<tr>
<th></th>
<th>Accepted tube</th>
<th>Refused tube</th>
</tr>
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<tbody>
<tr>
<td>Medical</td>
<td>6</td>
<td>1</td>
</tr>
<tr>
<td>Nursing</td>
<td>48</td>
<td>22</td>
</tr>
<tr>
<td>Allied Health</td>
<td>14</td>
<td>4</td>
</tr>
<tr>
<td>Health Assistants</td>
<td>35</td>
<td>12</td>
</tr>
<tr>
<td>TOTAL</td>
<td>103</td>
<td>39</td>
</tr>
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</table>
BUT to assist oral feeding for mentally competent patients who refused tube due to fears of ethical and legal consequences.
Retrospective feedback from 33 relatives revealed that staff emphasized advantages more than burdens during the consent process, which improved post-intervention using an informative consent form (Part I).

<p>| Relatives Reflexed the Focuses of Information Provided by Health Care Professionals |
|---|---|---|---|---|</p>
<table>
<thead>
<tr>
<th>Items</th>
<th>Relatives</th>
<th>Rationale</th>
<th>Advantages</th>
<th>Disadvantages</th>
<th>Complications</th>
<th>Alternatives</th>
</tr>
</thead>
<tbody>
<tr>
<td>30</td>
<td>28</td>
<td>15</td>
<td>9</td>
<td>2</td>
<td>5</td>
<td>3</td>
</tr>
</tbody>
</table>

No. of Relative (N = 33)
Retrospective feedback from 33 relatives revealed that staff emphasized advantages more than burdens during the consent process, which improved post-intervention using an informative consent form (Part II).
Results: (Con't)

- **Post-intervention improvement:**
  - Knowledge
  - Understanding of ethical principles
  - Practical skills
胃造口護理

每日沐浴時，用溫和之肥皂水清洗造口，再用清水沖洗。可用棉花清洗造口四周之碎屑。
胃造口周圍皮膚應保持清潔乾爽。
新胃造口手術後首三個月，須於進食前轉動胃瘻管一圈；每天一次，以防止造口處黏著周邊組織，其後，如造口情況理想，可減為至少每週一次，可於每次清洗造口時，輕輕轉動接近腹部皮膚之胃瘻管。
每日觀察胃瘻管於腹部之標記是否移位或有異常情況，如造口有紅、腫、熱之現象，應立即向醫生求診。

腸管護理

手術後胃造口仍未定型，故此胃腸管須最少在手術後八星期後才可由醫生更換。
定位器和皮膚之間，必須保持最少半厘米距離，以減少壓力。
妥善固定胃腸管的位置，每次灌食前檢查腸管上的標記是否正確。
每次更換胃腸管時，須清楚記錄胃腸之種類、尺碼、插入之度數、更換原因、進口情況有否異常……等以作參考。
每月須作胃腸管內氣球測試，確保胃腸管內之氣球有足夠注水，以防胃腸管鬆脫及移位。（醫院會轉介社康護士負責檢查氣球內的水容量。）
若胃腸管意外地滑出體外，應用清潔毛巾或紗布覆蓋胃造口，立即向醫生或專業人士求診（此為急症）。

流質的管餵配方（奶品）可在市面上購買，請注意罐上的保存期限和儲存指引。未開罐前，不須冷藏；但開罐後，必須立即蓋好罐蓋，然後存於雪櫃內冷藏，並於罐上註明開罐日期和時間，於24小時內用完，否則棄掉勿用。
每次奶品餵食時間不能超過8小，如奶品內加入水或其他營養補充品，則不能多於4小時。
若造口有滲液或滲奶，應立即停止餵養，向醫生求診。同時可用手輕拉體外之胃瘻管防止液體或奶滲出。
若連續3次抽吸胃內之胃液均多於餵養份量的一半，請立即向醫生求診。
若胃腸管有阻塞，可以用空的針筒抽吸，或注入100-150毫升之溫水溶解管內之阻塞物質。如不見效，請立即向醫生求診。
若回抽胃液呈深褐色，而其量多於50毫升；或連續3次出現此情況，應立即向醫生求診。

致____________及其家屬：

以下為閣下的胃造口餵養資料：

胃腸管尺碼：_________號
定位器在胃腸管的位置記錄：____度數
腸管開始使用日期：_________
餵養的流質品牌：_________
每日餵養次數：_________餐
每餐份量：_________毫升
每餐餵養時間：_________分鐘
每餐餵養後沖水：_________毫升

填寫日期：

（請妥善收攤此單張，以供閣下日後參考。）
Follow up data (4-6 months):

<p>| | |</p>
<table>
<thead>
<tr>
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<tbody>
<tr>
<td>Total 140 patients with mean age of 82.3 (SD 9.7)</td>
<td></td>
</tr>
<tr>
<td>Died in Index Admission</td>
<td>25 (18.6%)</td>
</tr>
<tr>
<td>Feeding at discharge:</td>
<td>R/T: 65</td>
</tr>
<tr>
<td></td>
<td>Oral: 50</td>
</tr>
<tr>
<td>Died Post Discharge (Median 145 days)</td>
<td>26 (Common cause of death was Pneumonia 58%)</td>
</tr>
<tr>
<td></td>
<td>Cumulative mortality 36.5%</td>
</tr>
<tr>
<td>Feeding after 4-6 months</td>
<td>R/T: 45</td>
</tr>
<tr>
<td></td>
<td>Oral: 44</td>
</tr>
</tbody>
</table>
Follow up data (4-6 months):

<table>
<thead>
<tr>
<th>115 discharged patients</th>
<th>Died:</th>
<th>18 (Mortality 27.6% was NOT statistically significant p=0.1209)</th>
</tr>
</thead>
<tbody>
<tr>
<td>65 Tube feeding at discharge:</td>
<td>R/T:</td>
<td>41</td>
</tr>
<tr>
<td></td>
<td>Oral:</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>OAH</td>
<td>51</td>
</tr>
<tr>
<td></td>
<td>Home</td>
<td>14</td>
</tr>
<tr>
<td>50 Oral feeding at discharge:</td>
<td>Died:</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>R/T:</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Oral:</td>
<td>38</td>
</tr>
<tr>
<td></td>
<td>OAH</td>
<td>18</td>
</tr>
<tr>
<td></td>
<td>Home</td>
<td>32</td>
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</table>
Follow up data (24 months):

<table>
<thead>
<tr>
<th>Died Post Discharge &gt;6months and ≤24months (Median 345, Quartile range 213.5-551.5)</th>
<th>39 (27.9%) (Common cause of death was Pneumonia 58%) Cumulative mortality 64.3%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feeding after 24months:</td>
<td>R/T: 27  Oral: 23</td>
</tr>
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</table>
Follow up data (24 months):

<table>
<thead>
<tr>
<th></th>
<th>Died:</th>
<th>R/T:</th>
<th>Oral:</th>
<th>OAH</th>
<th>Home</th>
</tr>
</thead>
<tbody>
<tr>
<td>45 Tube feeding</td>
<td>20</td>
<td>22</td>
<td>3</td>
<td>22</td>
<td>5</td>
</tr>
<tr>
<td>44 Oral feeding</td>
<td>19</td>
<td>5</td>
<td>20</td>
<td>11</td>
<td>12</td>
</tr>
</tbody>
</table>

89 patients remained post discharge 6 months
Conclusion:

Feeding problems in the elderly is associated with a high overall mortality. A care pathway identified patients who were discharged on oral feeding, without increases mortality at follow up. This study does not show any evidence that tube feeding confers a survival advantage but is strongly associates with being discharged to a nursing home.
Thank You