Focused on Feeding Tube Retention
A Nurse Driven Trial of a Nasal Bridle System
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Clinical Problem
- Nasoenteric feeding tube dislodgment is a common occurrence in our Trauma Neuro Intensive Care Unit (TNICU) at Sutter Roseville Medical Center (SRMC).
- Altered mental status, position changes, and transfers put patients at risk for early dislodgment.

Background
- Enteral nutrition has become an essential intervention in acutely ill and chronically ill patients (Gurram, 2011).
- Early nutrition has shown to maintain gut integrity, improve gastrointestinal motility, prevent bacterial overgrowth and translocation, and promote wound healing (Baskin, 2006; Stewart, 2014).
- Feeding tube dislodgement can lead to altered nutritional intake, increased risk of aspiration and infection, and exposure to repeated and unnecessary tests and procedures.

Clinical Question
Does the use of a nasal bridle retaining system, versus the traditional way of taping the tube to the nose, safely decrease nasoenteric tube pulls; therefore, decreasing loss of nutritional days and risks associated with each tube replacement for critical care patients in the TNICU?

Evidence Based Practice
- Bridling of nasoenteric feeding tubes has been around since the 1980s, though rarely used due to the complexity of placement (Gurram, 2011).
- In a 2014 meta-analysis, Bechtold et al. noted there was a 40% dislodgment rate in the tape groups compared to a 14% dislodgment rate in the nasal bridle groups.
- Gunn et al. (2009) demonstrated a 36% accidental tube removal rate in their tape group, compared to 10% in their bridle group.
- Seder et al. (2010) reported a significantly lower rate of unintentional feeding tube dislodgement in their bridled patients (18%) compared to their unbridled patients (63%).
- Mion et al. (2007) reported new or additional physical and/or pharmacological restraints in patients who inadvertently dislodged one or more medical devices.
- EGD for nasojejunal tube placement = $2,428.00; one view abdominal x-ray for nasogastric tube placement = $288.00; however, one 8F nasal bridle = $92.70 (SRMC, 2015).

Implementation
- The AMT nasal tube retaining system was used for this project.
- Nurses were taught to place nasal bridles using a train-the-trainer method.
- A randomized and controlled project design was implemented over a 13-month period.
- All patients in the TNICU A (n = 34) had their feeding tubes secured using the traditional tape method.
- All patients in the TNICU B (n = 34) had their tubes secured with a nasal bridle.
- All patients were tracked until time of tube removal or discharge.

Results

<table>
<thead>
<tr>
<th>Tape</th>
<th>Bridle</th>
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<tbody>
<tr>
<td>Tubes Intact</td>
<td>76%</td>
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<tr>
<td>Tubes Dislodged</td>
<td></td>
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</tbody>
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Total Number of Patients (N = 68)

TNICU A
- Tubes Intact: 26 (76%)
- Tubes Dislodged: 8 (24%)

TNICU B
- Tubes Intact: 32 (97%)
- Tubes Dislodged: 2 (3%)

Implications for Practice
- Nasal bridles may significantly reduce the proportion and rate of accidental tube removals.
- The new magnetic retrieval nasal bridles can easily be placed by nursing at the bedside.
- Moving forward, all patients with an 8F feeding tube will be routinely bridled in our TNICU.

References

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