Role of the Clinical Nurse Specialist

BARIATRIC PROGRAM, HRRH
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Clinician & Consultant

- Triaging & prioritization of patient referrals
- Risk Stratification of patient referrals
- Pre-operative chart sign-off
- Consultations for complex patient issues
- In-patient consultations for nursing care issues
- Co-ordination of consultations for patient optimization prior to surgery
- Multi-disciplinary patient case conferences
Administration

- Monitoring and planning clinic flow of referrals, wait times, patient satisfaction
- Internal networking through committee work
- External partnerships within the Bariatric Community
- External partnerships with the Central LHIN
- Implementing evidence-based practice into the clinical setting
Leader & Educator

- Identifying patient care needs through innovative research methodologies
- Identifying education needs for patients & staff
- Creating & evaluating patient & staff education materials
Current Initiatives

- Primary Care Education within the Central LHIN
- Diabetes Care Pathway pre & post Bariatric Surgery
- Education of Diabetes Education Programs in the Central LHIN
  - Webcast sessions using Webex
  - Education sessions
- Bariatric Nursing Group in Ontario
- Participation in the Ontario Bariatric Network
  - Creation of the Nutrition section of the OBN
  - Routine participation in registry communications
  - Ontario Telemedicine Task Force
The incidence of Obstructive Sleep Apnea in patients undergoing weight loss surgery is underdiagnosed and is as high as 86% to 96%.

No studies have definitively demonstrated in the excessively obese patients with an average BMI of approximately 55 that the diagnosis and treatment of OSA leads to improved surgical outcomes.

This retrospective study recruited participants from a group of patients electing to undergo Roux-en-Y Gastric Bypass Surgery at a Center of Excellence in Toronto, Ontario.

Patients not previously diagnosed with Obstructive Sleep Apnea (OSA) were subjected to both the Berlin & STOP-bang questionnaires preoperatively.

All patients underwent overnight polysomnographic testing and the results of their sleep study were compared to the risk associated of having OSA based on the responses from the questionnaires.

Sample size of 130 patients was analyzed and is presented here.

Currently this study has been concluded with 225 patients and we are presently analyzing this data.
Of the 101 patients studied, 36 (35.7%) had severe and 23 (22.8%) had a moderate sleep apnea.
<table>
<thead>
<tr>
<th>Screening Tools</th>
<th>Sensitivity</th>
<th>Specificity</th>
<th>PPV</th>
</tr>
</thead>
<tbody>
<tr>
<td>STOP</td>
<td>0.51</td>
<td>0.60</td>
<td>0.64</td>
</tr>
<tr>
<td></td>
<td>(0.38-0.64)</td>
<td>(0.43-0.74)</td>
<td>(0.49-0.77)</td>
</tr>
<tr>
<td>STOP BANG</td>
<td>0.81 *</td>
<td>0.33</td>
<td>0.63 *</td>
</tr>
<tr>
<td></td>
<td>(0.69-0.90)</td>
<td>(0.20-0.50)</td>
<td>(0.51-0.74)</td>
</tr>
<tr>
<td>BERLIN</td>
<td>0.25 *</td>
<td>0.76 *</td>
<td>0.60</td>
</tr>
<tr>
<td></td>
<td>(0.15-0.38)</td>
<td>(0.61-0.88)</td>
<td>(0.39-0.79)</td>
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</tbody>
</table>
Comparison of the three screening tools

- **BERLIN**
- **STOP**
- **STOP BANG**

<table>
<thead>
<tr>
<th></th>
<th>None (n=19)</th>
<th>Mild (n=23)</th>
<th>Moderate (n=23)</th>
<th>Severe (n=36)</th>
</tr>
</thead>
<tbody>
<tr>
<td>BERLIN</td>
<td>26.3%</td>
<td>21.7%</td>
<td>21.7%</td>
<td>27.8%</td>
</tr>
<tr>
<td>STOP</td>
<td>42.1%</td>
<td>39.2%</td>
<td>43.5%</td>
<td>55.6%</td>
</tr>
<tr>
<td>STOP BANG</td>
<td>57.9%</td>
<td>73.9%</td>
<td>82.6%</td>
<td>80.6%</td>
</tr>
</tbody>
</table>
Conclusion & Recommendations

- No studies have definitively demonstrated that the diagnosis and treatment of OSA leads to improved surgical outcomes.
- Studies are conflicting whether or not patients with untreated OSA have increased complication rates [7] [8].

- Questionnaires for the screening of the presence of OSA have been developed and validated including the STOP Bang Questionnaire [9] with a sensitivity ranging between 84-100% as well as the Berlin Questionnaire with a sensitivity 69-86%.
- Bariatric surgical candidates with BMI’s less than 50 who are determined to be high risk using the Berlin Questionnaire, may have no increased risk of poor postoperative outcomes including transfer to SDU/ICU, intubation or initiation of CPAP/BIPAP therapy, when investigated preoperatively with sleep studies and treated where indicated [10].

- It is recommend that all patients undergoing bariatric surgery be subjected preoperatively to screening questionnaires for sleep apnea.
- Amongst screening questionnaires, the STOP BANG is a preferred tool due to higher sensitivity and lower false negative rates in comparison to the Berlin Questionnaire.
- Bariatric surgical patients who are considered high risk for sleep apnea using clinical judgment or screening tool data should be subjected to an overnight polysomnographic study and treated as clinically indicated.
Thank You!

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