Treating Paediatric Morbid Obesity using the Multidisciplinary Intensive Inpatient Approach

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Background

- A tertiary level, structured multidisciplinary outpatient approach may not always be sufficient in identifying morbid obesity causation
- In the absence of other effective treatment modalities, a hospital stay approach can be a suitable option in selected resistant cases
- We share our experience at a multidisciplinary Tier 3 paediatric obesity set up

Materials and methods

Retrospective case record review of patients admitted for inpatient obesity management over a 12-month period from March 2018 to February 2019

Total no of inpatient cases studied = 4
( approximately 5% of patients seen in one year)
Average BMI SDS on admission = 4.1
Mean age = 9.25 yrs (4-13 yrs)
Mean length of hospital stay = 10.5 days

- During their stay, all patients received an individualised multi-modality support, involving inputs from paediatric endocrinologist, obesity nurse specialist, paediatric dietitian, social worker and clinical psychologist
- Eating patterns, sleep, behavioural and psychosocial issues were considered
- They were given a guided menu choice exclusively from the hospital menu
- Regular supervised exercise in the form of hospital walks was encouraged and access to electronic medium was kept to a minimum
- Family re-education about obesity and lifestyle modification were reinforced

Table 1: Inpatient stay - Weight, BMI SDS at admission, discharge and follow-up

<table>
<thead>
<tr>
<th>Pt</th>
<th>Sex</th>
<th>Age (yrs)</th>
<th>Stay (days)</th>
<th>Admission weight(kg)</th>
<th>Admission BMI SDS</th>
<th>Discharge Weight (Kg)</th>
<th>Discharge Weight loss %</th>
<th>Discharge BMI SDS</th>
<th>Follow up BMI SDS at 1 month</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>M</td>
<td>11</td>
<td>5</td>
<td>142</td>
<td>4.18</td>
<td>139.8</td>
<td>1.55</td>
<td>4.16</td>
<td>4.15</td>
</tr>
<tr>
<td>2</td>
<td>M</td>
<td>13</td>
<td>6</td>
<td>110</td>
<td>3.71</td>
<td>106.6</td>
<td>3.09</td>
<td>3.64</td>
<td>3.64</td>
</tr>
<tr>
<td>3</td>
<td>M</td>
<td>9</td>
<td>22</td>
<td>86.5</td>
<td>4.11</td>
<td>77.4</td>
<td>10.5</td>
<td>4.01</td>
<td>3.87</td>
</tr>
<tr>
<td>4</td>
<td>F</td>
<td>4</td>
<td>9</td>
<td>35.5</td>
<td>4.4</td>
<td>33.9</td>
<td>4.5</td>
<td>4.14</td>
<td>4.13</td>
</tr>
</tbody>
</table>

Results

- Successful weight loss was documented at discharge in all 4 children (Fig 1)
- The average documented weight loss was 4.9% (1.55-10.5%) (Fig 2)
- Post discharge follow-up at 1 month, BMI SDS losses from admission were sustained in all children

Conclusions

- Supervised intensive multidisciplinary inpatient setting may be required in select cases to demonstrate successful weight loss
- It offers a crucial contact period between the family and multidisciplinary team for re-education
- It may identify an at risk home environment which may warrant care in an alternative environment
- Long-term sustainability and feasibility of the inpatient approach will remain a challenge

Reference