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Medi Quest BRS Hospital

A monthly News letter from BRS Hospital

OBESITY IN CHILDREN - PART 2

MANAGEMENT OF OBESITY IN CHILDREN

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Introduction

Obesity is defined as excessive accumulation of fat that is detrimental to health and well being. It is a result of positive energy balance due to excessive calorie intake and or inadequate physical activity and is influenced by various genetic, behavioural and environmental factors.

India is currently placed third after USA and China in the global burden of childhood obesity.

National Family Health Survey 5 data from India reported 3.4% of children below five years to be overweight

Pooled data from 52 Indian studies show that the prevalence of childhood and adolescent overweight /obesity is 19.3%.

The American Academy of Pediatrics in its position paper in 2023 has stated that the initial management of childhood obesity is lifestyle modification at the primary level, if it falls to produce results, the management is transferred to a multi-disciplinary team for multi-modal approach.

Management of Obesity : includes

1. Dietary Management
2. Physical Activity
3. Pharmaco therapy
4. Bariatric Surgery

Dietary management was discussed in November month Mediquest. Here we discuss on physical activity, pharmaco therapy, and bariatric surgery

Role of Physical Activity

Moderate to vigorous aerobic activity at least 60 min / day along with resistance exercise 20mins 3days a week are effective interventions for decreasing body weight

Non weight bearing activities like recumbent and stationary cycling, rowing ergometry and swimming are recommended for children with severe obesity.

Gradually core strengthening exercises, bone strengthening activities like jumping and skipping are introduced.

TABLE 1: Types of exercises.

Aerobic Exercises	*Muscle-strengthening Exercises*	*Bone-strengthening Exercises*
60 minute each day	*3 days per week*	*3 days per week*
Moderate • Baseball, softball • Brisk walking • Bicycle riding • Dancing • Hiking uphill • Housework • Rollerblading • Running • Skateboarding • Yard work, sweeping, lawn mowing **Vigorous** • Basketball, volleyball • Bicycle riding • Jumping rope • Martial arts • Running • Sports, soccer	• Gymnastics • Lifting weights • Monkey bars • Playground equipment • Pushups • Pull-ups • Sit-ups • Rope and tree climbing • Using resistance bands • Tug of war	• Cheerleading • Football • Hop-scotch • Jump rope • Jumping jacks • Martial arts • Tennis • Track and Field • Skipping • Swimming

Pharmacological management of Childhood Obesity

Pharmacotherapy is offered for adolescents above 12yrs of age after a significant lifestyle modification program has not yielded results or if there is an associated comorbidity. Pharmacotherapy is not presented as monotherapy and are always prescribed along with a comprehensive lifestyle modification program.

Drug therapy is termed ineffective if it fails to safety reduce BMI by 5% over 12weeks of sustained use

1. GLP-1 one analogues
   Liraglutide given as daily SC injection
   Semaglutide as a once a week SC injection

2. Or listat 120mg tid – not be taken for longer than 6months, if no response seen in 12weeks the drug should be stopped Gastro intestinal lipoprotein lipase inhibitor.

3. Phenteramine 7.5mg to 37.5mg PO, FDA approved for short term 6weeks > 16years of age, Nor epinephrine reuptake inhibitor.

4. Topiramate 25 mg to 100 mg PO BID FDA approved for binge eating disorder.

5. Metformin 250 to 1000 mg PO bid. Not for use in obesity approved for use above 10years to treat Type 2 Diabetes. Adjunct use to prevent weight gain in girls with PCOD and on antipsychotic medication

6.Octreotide 5-15 mcg/kg/day SC div TID. Used in hypothalamic obesity

Bariatric Surgery

Surgical management may be offered in children older than 12years of age with class 2 obesity and associated comorbidities or class 3 obesity with or without comorbidities only after failure of proper trial of intense lifestyle modifications and pharmacotherapy for at least 6 month.

Conclusion

Pediatricians should recognize and treat pediatric obesity. The most common cause is exogenous obesity. In addition to weight and height waist circumference should be measured After screening for co-morbidities counselling regarding physical activity, diet and screen time must be offered to the child or adolescent.

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Congratulations to

Dr. Narendran Sairam,

Intensivist, BRS Hospital.

For Successfully passing the MRCP Exams

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