ACEing the person-centred choice of anti-obesity therapy

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Abstract

The "3 ACE Check List" is an innovative framework that aims to guide clinicians in selecting appropriate anti-obesity therapy. The 3ACE list consists of nine factors, attractively, alliteratively and accurately listed in three columns. These facets represent the entire biopsychosocio- environmental spectrum of determinants of obesity. It simplifies decision-making, by helping clinicians match therapeutic choices with individual patient characteristics, so as to optimize outcomes and satisfaction. We suggest the use of this model in obesity counselling and care.

Keywords: Biopsychosocial, counselling, obesity, overweight, person centred care

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Introduction

Person centred care refers to an approach where the patients preferences are respected patient needs, values and preferences guide clinical decisions.[1] Lifestyle disorders which are invariably chronic in nature, are uniquely challenging as patient involvement is critical to the success of therapy. This is especially true for obesity.[2] While many experienced clinicians practice person-centred care intuitively, early career physicians may need guidance in doing so. The field of obesity management is witnessing an expansion in the choice of therapies available, each characterized by varying degrees of efficacy, efficiency and endurance.[3] This proliferation makes the selection process highly complex. Clinicians face the challenge of navigating through a landscape where multiple biomedical, psychological and social factors interact to modify pharmacological choices. This complexity highlights the need for person-centred obesity care.

We suggest the "3 ACE Check List," an innovative framework that aims to guide clinicians in selecting appropriate anti-obesity therapy. The 3 ACE Check List is designed to simplify decision-making for obesity care professionals. (Table) It helps clinicians match therapeutic choices with individual patient characteristics, so as to optimize outcomes and satisfaction. The 3ACE list consists of nine factors, attractively, alliteratively and accurately listed in three columns. These facets represent the entire biopsychosocio- environmental spectrum of determinants of obesity.

Table: The 3 ACE Check List for informed decisions making in obesity.

A	C	E
Age	Cognition	Expectation
Anthropometry	Comorbidities	Economics and Environment
Appetite (and dietary preferences	Contraception and conception	Expertise

Age

While adults of all ages can potentially receive all pharmacological therapies for obesity, for adolescents the choices are limited. Orlistat has been approved for use in children above 12 of age.[4] Data from trials such as the STEP-TEENS suggests that GLP-1 agonists are safe and effective therapies for adolescents with obesity, although approval for use in this age is awaited.[5] The American Academy of Pediatrics (AAP) allows bariatric surgery for adolescents above 13 years with severe obesity. This recommendation is, however, controversial and more research in this area is warranted.[6]

Anthropometry

Less severe forms of obesity may be managed by lifestyle interventions or conventional pharmacotherapeutic agents like orlistat or appetite suppressants. However, severe obesity is less likely to benefit adequately from these interventions. In such cases, either potent incretin based therapies (such as tirzepatide or semaglutide) or bariatric surgery are viable options.[7] In South Asian populations, sarcopenia or sarcopenic obesity is common. A high protein diet along with resistance training is essential in these patients as weight loss can aggravate sarcopenia. Importantly, up to 40% of weight lost with potent incretin based therapies can be muscle.[8] Hence, special care must be taken to diagnose or anticipate sarcopenia before initiating such therapies.

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Appetite and Dietary Preferences

Patients who are motivated to follow lifestyle interventions but are struggle with voracious appetites can benefit from the use of centrally acting appetite suppressants. Such patients may also benefit from substitution of carbohydrates with satiety promoting protein and fibre rich foods. Meal replacements are excellent options for patients who struggle with portion control and meal planning or those who have poor meal quality and micronutrient deficiencies. These include patients who have busy lifestyles and cannot prepare healthy meals. Further, the rapid initial weight loss with meal replacement can boost the motivation of patients who are not able to achieve measurable weight loss with lifestyle interventions.[9]

Patients who have difficulty in adhering to a diet plan may be advised to consume the same foods as they use at home. They can be taught to control portion sizes and minimize high calorie foods to achieve a caloric deficit. It is interesting to mention the "orlistat paradox" here- it works best in patients with high fat diet but also causes the most adverse effects in the same patients.[10]

Cognition and Psychological Issues

Patients with cognitive or psychological issues are not good candidates for centrally acting anti-obesity medications. Further such patients may not be able to report adverse effects clearly.[11] In such cases, high index of suspicion for serious adverse effects, including non-arteritic ischaemic optic neuropathy (NAION) seen with incretin based therapies, must be ensured.[12] Consent for bariatric surgery and post bariatric surgery management may also be challenging in patients with cognitive issues. Nutritional deficiencies post bariatric surgery will require careful management in those with cognitive or psychological issues.

Comorbidities

Patients who have cardiovascular disease or who have risk factors for cardiovascular disease, should preferably be treated with incretin based therapies such as semaglutide and tirzepatide which have proven cardiovascular benefits.[13] Patients with disabling gastrointestinal issues, whether pre-existing or induced by incretin based therapies, can be offered centrally acting agents. Both bupropion and topiramate can cause angle closure glaucoma and should be avoided in patients suffering from or predisposed to this condition.[14] The risk appears to be higher with topiramate and is attributed to ciliochoroidal effusion and forward displacement of lens- iris diaphragm. Topiramate also causes hypocitraturia and high urine pH, thereby increasing risk of nephrolithiasis. Hence, this drug is better avoided in patients with history of recurrent nephrolithiasis.[15]

Contraception and Conception

In women of child bearing age with obesity, plans for future conception and need for contraception must be discussed prior to initiating pharmacological or surgical therapy for obesity. Weight loss can improve fertility and lead to unplanned conception in females not otherwise using contraception. Tirzepatide can cause delayed gastric emptying and impair absorption of oral contraceptive pills (OCP). Therefore, if the patient is on OCPs, for the initial 4 weeks of tirzepatide initiation and/or escalation, OCP should either be replaced by other hormonal contraceptive such as intrauterine devices or used in combination with barrier methods. If the above is not feasible, tirzepatide should be avoided. Similar precautions however are not needed with oral and injectable semaglutide. If the patients are desirous of pregnancy, the same must be delayed for 3 months after stopping incretin based therapies and at least one year after bariatric surgery.[16,17]

Gestational weight gain (GWG) is an important metric in obesity as obesity often begins or worsens after pregnancy. As mentioned earlier, pregnancy often occurs post-weight loss with incretin-based therapies or bariatric surgery. However, rapid GWG is seen in females exposed to incretin-based therapies. Gestational weight gain in these women is almost 3 kg higher than those not exposed to incretin based therapies.16 However, GWG in women who have undergone bariatric surgery remains within normal limits

Expectations

The expectation of the individual is important while crafting a therapeutic plan. A patient who wishes for a long-term treatment for sustained metabolic and health benefits is a good candidate for incretin-based therapies. In contrast, persons planning a short-term therapy, (perhaps prior to marriage!) may be given bupropion or topiramate. The other and probably more important expectation is related to magnitude of weight loss. Centrally acting agents will produce around 5% weight loss, while moderate weight loss of around 10% can be expected with semaglutide or liraglutide. Patients desiring profound weight loss of 20% or more should either be offered tirzepatide or counselled for bariatric surgery.[18]

Economic or Environmental Factors

These factors are crucial as feasibility of the proposed intervention hinges on them. A healthy balanced diet in the modern world is often expensive and may not be affordable to all. Similarly, bariatric surgery as well as incretin-based therapies may be prohibitive in terms of the cost for many patients. But since surgery is a one-time expense while drugs have to be taken perennially, bariatric surgery may turn out to be more economical for many patients in the long run.

Environmental factors also affect the feasibility of exercise. Women in several parts of South Asia may face restrictions in moving outside their house for the sole purpose of exercise. However, walking for religious or other socially acceptable reasons may be allowed. Many urban areas lack adequate space or parks for physical activities. Persons living in these conditions may begin structured indoor exercises and household chores.[11]

Expertise or Experience of Physician

The physician should avoid using anti-obesity treatments with which they are not familiar or do not have experience. Support staff such as nutritionists and psychologists help in lack of such staff counselling for lifestyle interventions. The presence of facilities to screen, detect and manage complication arising out of medical or surgical treatment is also an important factor in choosing interventions.

Summary

The 3 ACE Check List provides a comprehensive framework for the personalized management of obesity, enhancing therapeutic outcomes by aligning treatment with patient-specific factors. This approach not only improves patient adherence and satisfaction but also optimizes clinical effectiveness through a nuanced understanding of individual needs and preferences. We encourage physicians involved in obesity management to use this check list while making treatment decisions.

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