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Stevia rebaudiana the unique medicinal plant
 with sweet taste having hypoglycemic and
 hypolipidemic activities



The Editor,

We read the interesting article ‘The truth about artificial sweeteners – are they good for diabetes’ by Purohit and Mishra¹ published in your esteemed journal. This paper brings out clearly and convincingly side effects associated with currently popular sweeteners namely saccharin, aspartame, neotame and sucralose particularly their cancer producing potentials. On the other hand, there is a brief mention about stevia which is derived from plant *Stevia rebaudiana*. It possesses unique property of not only having a sweet taste but also sugar lowering and lipid lowering property – a distinct advantage over chemical sweeteners.² *Stevia rebaudiana* contains steviol glycosides namely steviosides, rebaudioside, steviolbioside and isosteviol, which are responsible for its sweetness and sugar lowering properties. It has been said to be safe in long term use.³ Interestingly while stevia is a safe sweetener the currently popular chemical sweeteners have potential to cause cancer when used for long time. It is also well known that these sweeteners are used in many smokeless tobacco products like *gutkha* and *paan masala* preparations and these patients are reported to have oral and bladder carcinoma.⁴ Further looking at the current pandemic of diabetes prevailing all over Indian subcontinent, use of stevia as an alternative sweetening agent for people who have diabetes, pre-diabetes and/or obesity needs to be explored in robust statistically designed studies.

Conflicts of interest of each author

None.

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Authors reply: Stevia: Long term data is lacking!*Reply*

We agree with the letter that Stevia may be the safest among the currently available artificial sweeteners, however there are some limitations to this product as well. They are more expensive than natural “sugar,” have some minor side effects (bloating, nausea, etc.) but most importantly have licorice flavor and somewhat bitter after-taste so much so that they are not liked by most. Interestingly, while Food and Drug Administration, USA has approved refined Stevia (product Rebaudioside A) as generally recognized as safe (GRAS), it has not approved leaf or extract of Stevia as GRAS because of possible effect on reproductive, renal or cardiovascular system. In any case robust, long term (5 years or so) data on clinical outcomes with Stevia is still lacking.

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Exercise based evaluations and rehabilitation in heart failure: An addendum to the Cardiology Society of India’s management protocols for chronic heart failure



The Editor,

We read with great interest the comprehensive consensus document on management of chronic heart failure (HF) recently published in the Indian Heart Journal.¹ To elaborate on the rehabilitative aspect, we hereby propose a rehabilitation algorithm for both hospitalized and out-patient, stable HF patients.

Exercise-based evaluations

Evaluation of exercise capacity is a crucial step to the functional assessment of patients with HF. Though the gold standard remains to be cardiopulmonary exercise testing, high costs of establishing labs makes this option unviable in India. Therefore, the use of the six minute walk test to assess the distance covered (6MWD). The test is safe and can be used across all classes of HF. Clinical monitoring using the 6MWD is useful and can be easily done with no extra costs of infrastructure.

Rehabilitation of HF

Participation in exercise training and physical activity for HF is a class I, Level A recommendation.² Recently, there has been a focus on early rehabilitation of acute HF patients. A previous study from our center found that participation in early CR for acute HF improved discharge 6MWD as compared to those not receiving early CR.³ Discharge evaluations with the 6MWD is important as it would guide exercise prescription following discharge.

Phase-2 CR requires patients to continue exercise either under supervision in a center or at home. With the barriers to CR in the Indian context highlighted in previous studies,⁴ supervised programs may not always be feasible. Thus, the need for low intensity home based programs which can be administered by an CR exercise specialist to ensure safety. Based on our data and current clinical practice, and on the early CR algorithm proposed for ST elevation myocardial infarction⁵ we propose a clinical rehabilitation algorithm for HF patients for both early and subsequent phase-2 CR (Fig. 1a and b).