MEDIBEATS
The Medical Bulletin

In Critical Care

1. The C:I ratio is an estimate of the grams of carbohydrate that each 1 unit of rapid-acting insulin will cover; a C:I ratio of X:1 means that 1 unit of insulin should be given for every X grams of carbohydrate to be consumed. The initial C:I ratio for each person is often calculated as follows: 500/Total daily dose (TDD) of insulin.

2. A correction factor (CF) is the amount of rapid-acting insulin that should be added to the mealtime dose when the premeal BG is above the target range or that is taken alone between meals to correct high-BG values. The CF is an estimate of the expected BG drop for each 1 unit of insulin given when the BG is elevated above the goal; a CF of N:1 means that a person should take 1 unit of insulin for every N mg/dL the current BG level is above the individualized target. We calculate an initial CF for each person as 1650/TDD.

3. The American Diabetes Association (ADA) recommends a general A1c goal of <7.0% for many nonpregnant adults with diabetes, whereas the American Association of Clinical Endocrinologists (AACE)/American College of Endocrinology (ACE) recommends an optimal goal of ≤6.5% if it can be achieved safely and affordably.

4. General glycemic goals are recommended for people with T2D, but targets should always be individualized based on patient-specific considerations that may affect the risks and/or benefits of intensive treatment. Factors that may warrant less stringent glycemic goals include a high risk for hypoglycemia or other drug side effects, a long duration of diabetes, limited life expectancy (long-term benefits of a more intensive goal will likely not be realized), a high comorbidity/complications burden, and patient preferences.

5. The ADA recommends comprehensive lifestyle management and metformin as first-line therapy in people with T2D. Metformin should be continued as long as it is tolerated.

6. Initial combination therapy can be considered to extend the time to treatment failure or when more than one glucose-lowering agent is needed to achieve glycemic targets.

7. Early initiation of insulin therapy is recommended in people presenting with a BG of ≥300 mg/dL or an A1c of >10%, and/or if the individual is experiencing symptoms of overt hyperglycemia (polydipsia, polyuria) or catabolism.

8. GLP-1 receptor agonists and SGLT-2 inhibitors with proven CV and renal benefit are recommended for use in people with comorbid ASCVD, HF, and/or CKD. SGLT-2 inhibitors are preferred in the setting of HF and/or CKD. The addition of these agents to mitigate CV and kidney risk is recommended regardless of the current A1c or A1c goal.

9. Thiazolidinediones and one DPP-4 inhibitor, saxagliptin, should be avoided in people with HF; these medications have been reported to increase the risk of hospitalization for HF.

10. When intensifying therapy to improve glycemic control, major considerations for medication selection include (1) avoidance of hypoglycemia, (2) minimization of weight gain or promotion of weight loss, and (3) cost considerations.

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