

DIABETES MELLITUS

Update on new therapies for pediatric diabetes

Actualización sobre las nuevas terapias para la diabetes en pediatría

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Intensified insulin therapy with differential substitution of basal and bolus insulin is the gold standard also for children with type 1 diabetes. The different absorption profiles and half-lives of insulin preparations allow insulin therapy to be tailored for the individual patient. Ultra-rapid insulin analogues show improved postprandial glucose levels, while second-generation basal analogues are associated with less hypoglycemia and reduced events of hyperglycemia and ketosis as a surrogate marker of a high risk for DKA. Adjunct therapy to insulin with SGLT-inhibition has received regulatory approval for adults with a BMI > 27 kg/m². Studies in adults with type 1 diabetes showed improved glycemic control, significant reduction in body weight, systolic blood pressure and no increase in hypoglycemia. However, increased risk of diabetic ketoacidosis with uncharacteristica-

lly mild-to-moderate glucose elevations (euglycemic ketoacidosis) is associated with the use SGLT2 inhibitors and thus research experience in the pediatric population is limited. New parameters like time in range and time below range suitable for identifying high glycemic variability as risk factor for severe hypoglycemia complement the HbA1c targets and the ambulatory glucose profile (AGP) in a shared decision making on therapeutic adjustments between the diabetes team and families with a child with diabetes. Automated insulin delivery as a hybrid closed loop or dosing advice using artificial intelligence are becoming a clinical reality. However, diabetes education as a team approach, defining clear targets with outcomes evaluated in multinational registries like SWEET remain important for shaping the future of pediatric diabetology.