Clinical application of two computerized diabetes management systems: comparison with the log-book method.

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In two consecutive studies the clinical application and suitability of two computer-assisted data management systems (Camit and Cadmo) were evaluated in a prospective manner. In each study nineteen long-standing, stable insulin-dependent patients were randomly assigned to one of two groups. In study I assessment of metabolic control and insulin dose adjustments were based either
Clinical application of two computerized diabetes management systems: comparison with the log-book method. Authors: Ryff-de Leche A, Engler H, Nutzi E, Berger M, Berger W. Journal of Diabetes Science and Technology. Evaluation by two studies of two computer-assisted data management systems for the management of diabetes and insulin dosing. Years of study: Not Available. Study Design: RCT. Evaluation Method: Measures of HbA1c, hypoglycemic events, and glucose levels. HIT System: The computer-assisted data management systems used were Camit S1 and Cadmo (an updated version of Camit S1), both commercially available computer programs. Quality of Care and Patient Safety Outcome: HbA1c values decreased significantly in both studies (p < 0.05). A clear decline in hypoglycemic events as well as a significant reduction of the percentage of glucose values below 4.0 mmol/l (p < 0.005) and a marked increase (p < 0.05) in the percentage of glucose levels in the target range (4.0-10.0 mmol/l) were observed. We found both computerized assessment systems to be reliable and suitable for the assessment of blood glucose control and for insulin dose finding. The graphical and statistical presentation of the numerous glucose and insulin data allowed a better summary of blood glucose control and metabolic trends. More time could be spent for problem solving, which proved to be much less exhausting with the computer for the attending physician. Further studies should address the educational potential of computerized systems for the patient as well as for the physician.