EVALUATION OF DIGITAL PHOTOGRAPHY AS A METHOD OF FOOD CONSUMPTION RECORD IN TYPE 2 DIABETIC PATIENTS

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Objective: To compare digital photography method with weighted food record in Type 2 DM patients. Fifty type 2 diabetics (50% men and 50% females) agree to participate in a study aimed to compare two methods to food record. In this study 150 dinners were quantitatively analyzed using a digital photography method, and the results were compared with the gold standard method of weighted food record. The quantity of calories and carbohydrates, protein and fat grams were determined by both methods. Pearson Correlation Coefficient and Lin’s Concordance correlation coefficient were used to determine if the photograph method reproduces the weighted record as a gold standard method. Finally, Student’s t-test was used to identify if there were statistically significant differences between both methods. Energy and macronutrient intake from evening meals were estimated using the patient’s photographic record. As compared to the gold standard method, photography records were slightly lower but not significantly different. Assessment of calories and macronutrient intake were positively correlated and had a positive concordance (k 0.9). No statistical differences were noted between the digital photographic record and the direct weight method. Our results showed that digital photographic records can be used instead of direct weighting of foods to estimate the intake of energy and nutrients of people with diabetes mellitus. Digital photography can facilitate dietary analysis in such patients using technology available in their homes.