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Barriers in adherence to dietary salt intake recommendations in participants with type 2 diabetes and co-morbid hypertension

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Hypertension is present in up to two-thirds of the patients living with type 2 diabetes ⁽¹⁾. Management of high blood pressure plays a vital role in reducing the risk of macrovascular and microvascular complications in patients with type 2 diabetes ⁽²⁾. A meta-analysis of randomized controlled trials in diabetes patients, concluded that reducing salt intake lowers blood pressure in type 2 diabetes ⁽³⁾.

We conducted a dietary survey to determine the knowledge, attitudes, and practices (KAP) regarding dietary salt intake in participants with type 2 diabetes and co-morbid hypertension. A total of fifty participants within the age group of 20–75 year, were recruited from the Diabetes Foot Clinic, Basildon & Thurrock University Hospital. An interviewer-administered questionnaire was used to assess awareness level on varying aspects of dietary salt intake. The Multiple Pass Recall method was used to obtain dietary data, for determination of food sources of salt ⁽⁴⁾ and estimate daily salt intake.

The mean KAP score for the study group participants was 22.6 (6.1) out of a maximum achievable score of 40. Only 12% of the study participants achieved a KAP score above 32 corresponding to >80% KAP score achievement. The mean KAP score of the participant group consuming >6g/day salt was lower compared to the group consuming <6g/day (21.6 (5.4); 22.9 (6.3) respectively, NS). The majority of the participants (98%) were not aware of UK government recommendation of '<6 g salt/day'. Lack of understanding of food sources of salt; poor self-perception of salt intake; non-practice of reading salt content on nutrition label and frequent addition of salt to food during cooking were identified as other potential barriers in adherence to the recommended salt intake. The nutritional analysis of the dietary data indicated 28% of the participants consumed >6 g/day of salt and nearly half of the participants consumed >5g/day i.e. above WHO salt intake recommendation. Pivot tables were used to determine the top food contributors to salt intake as: bread, added salt during cooking, canned beans, bacon, ham, processed meat and meat dishes as beef burgers, pork or chicken based chinese takeaway, ready meals, salted butter, cheese and soups.

The findings of our study indicate low level of awareness related to varying aspects of dietary salt intake among the hypertensive type 2 diabetes participants and describes the specific barriers in adherence to the recommended salt level. We hope to use this data to formulate a salt calculator as an educational tool to increase awareness and ideally decrease salt intake in this, at-risk population.

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