

Introduction

To date, the prevalence of diabetes amongst HPN patients is unknown in the UK. Furthermore, it's unclear what's the proportion of patients who become diabetic following intestinal failure. The aims of the projects were as follows:

1-Prevalence of Type-1 and Type-2 Diabetes Mellitus (DM) in patients on HPN and development of iatrogenic DM.

2- How the management of pre-existing diabetes changes with HPN

3- Who manages DM in patients on HPN and any significant challenges

Methods

UK HPN centres were invited to participate in this clinical service evaluation. The database, devised by the UHB IF team and diabetologists, was sent to participating centres to gather data for each HPN patient with diabetes mellitus with point-prevalence 31/12/2021.

Data included IF and DM modes of management and subsequent complications.

Results:

21 centres (23 invited) from England, Wales and Northern Ireland reported 121 patients were diabetic from a total 2344 on HPN with point prevalence 31/12/2021 of 5%. The leading mechanism for IF was short bowel syndrome 59 (49%) followed by Intestinal dysmotility 28 (23%).

43 (36%) patients were overweight and 19 (16%) obese.

18 (14%) of patients had Type-I DM. 38 (31%) had T2DM on Insulin, 12 (10%) had T2DM on oral hypoglycaemics, 9 (7%) had T2DM on Insulin and oral hypoglycaemics, 19 (16%) had T2DM that was diet controlled, 24 (20%) developed iatrogenic diabetes mellitus.

47(39%) of patients didn't have diabetes prior to starting PN.

Of those who were diabetic before starting PN, 28 (38%) didn't have changes in diabetic management, 18(24%) required insulin therapy moved to overnight, 13 (17%) started insulin, 3 (4%) required insulin pump and 2(3%) oral hypoglycaemics. 8 (7%) of patients required reduction of calories, 5(4%) reduction in glucose days and 12 (10%) of patients had glucose bags avoided due to poor glycaemic control. PN was sole source of nutrition in 28 (23%) patients.

65 (54%) had diabetes managed by local diabetologist, 45 (37%) by GP and 6 (5%) by IF team. Glucose monitoring: 55(45%) of patients had home blood glucose monitoring, 43(36%) Hba1c and 14 (12%) Freestyle Libre.

8 (7%) of patients required minimised kCal, 5(4%) required reduction in glucose days and 12 (10%) required avoidance of glucose bags.

Conclusion:

- Point prevalence of diabetes on HPN was found to be 5%, with 20% a result of IF/HPN
- Clinicians found management of half of diabetic patients to be challenging, with 48% of patients requiring changes to management.
- There was no standardisation of the management of diabetes with and further guidance is needed.