

Glycaemic control in group 2 license holders with diabetes mellitus



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Introduction

Diabetes is a metabolic disorder characterized by chronic hyperglycaemia as a result of defective insulin secretion, insulin action or a combination of both. Diabetes represents a significant cause of morbidity and mortality in Scotland¹. Poor glycaemic control increases the risk of diabetes associated complications. A HbA1c target of 48-53 mmol/mol is recommended to reduce the risk of these complications¹.

For group two driving license holders with diabetes there are specific requirements set out by the Driver and Vehicle Licensing Agency (DVLA). This includes frequent blood glucose monitoring in addition to an annual review by a specialist in diabetes. The patient must retain full awareness of hypoglycaemia with no episodes of severe hypoglycaemia within the preceding twelve months².

It is therefore hypothesised that this patient group is likely to aim for less tight glycaemic control to avoid hypoglycaemia due to the socioeconomic implications of losing their license.

Aims

This project aims to assess glycaemic control in patients with diabetes who are group two license holders. A further aim is to assess the associated complications and episodes of hypoglycaemia in this patient group.

Methods

Patient records were reviewed by secretarial staff working within the diabetes team. Patients with diabetes in possession of a group two license were identified through patient notes and DVLA correspondence. Data regarding glycaemic control, episodes of hypoglycaemia and associated complications was collected from SCI Diabetes. Any supplemental information was gained from clinic letters available on the local clinical portal.

Results

Patient demographics

Thirteen patients with diabetes were identified as holding a group two license. The patient characteristics are summarized in table 1.

Patient characteristics		
Age (years)		52.2 (15.3)
HbA1c at last clinic visit (mmol/mol)		70.6 (16.2)
HbA1c over last five years (mmol/mol)		77.4 (9.6)
Duration of diabetes (years)		11.1 (6.9)
Female (%)		8.7
Type 1 diabetes (%)		53.8
Smoking status (%)	Ex-smoker	15.4
	Current	38.5
	Never	46.2
BMI (n=12) (%)	Normal	33.3
	Overweight	25
	Obese	41.7

Table 1. Summary of patient characteristics. Mean (SD) presented unless otherwise indicated.

All patients were treated with insulin with four of the type two diabetic patients treated with an oral hypoglycaemic agent in addition to insulin.

Diabetes associated complications and hypoglycaemia

Diabetes associated complications plus hypoglycaemia episodes and awareness are presented in table two.

Complications		Percentage (%)
Albuminuria (n=12)	Normoalbuminuria	66.7
	Microalbuminuria	25
	Macroalbuminuria	8.3
Peripheral neuropathy (n=12)		25
Erectile dysfunction (n=7)		57.1
Foot care (n=12)	Low risk	75
	Moderate risk	16.7
	High risk/in remission	8.3
Eye disease- Retinopathy (n=13)	Mild background retinopathy	69.2
	No retinopathy	30.8
Eye disease- Maculopathy (n=13)	Referable	38.5
	Observable	7.7
	No maculopathy	53.8
Severe episode of hypoglycaemia (n=13)		0
Impaired hypoglycaemia awareness (n=13)		7.7

Table 2. Summary of diabetes associated complications and hypoglycaemia.

No patients were identified as having cardiovascular or cerebrovascular disease.

A small proportion of patients (23%) had had issues regarding their license during the course of their condition. Two patients had their license revoked and one patient surrendered their license whilst having issues with glycaemic control.

Discussion/Conclusion

Diabetic patients who are group two license holders have poorer glycaemic control than the target set by national guidelines. Treatment to glycaemic targets increases the risk of hypoglycaemia³. In this patient group less tight glycaemic control may therefore be desirable for the patient in order to reduce the risk of hypoglycaemia and the implications of this.

Details regarding identification of complications was limited by data availability on SCI Diabetes. For some patients the data entry was incomplete.

To the best of our knowledge this is the first study in the UK to examine glycaemic control and associated complications in this patient group. The number of patients in this study was too small to allow comparison between subsets. The small number included in this study may therefore not be representative of this patient population. Further studies are required to identify whether patients with diabetes who hold a group two license are at increased risk of diabetes associated complications in relation to the general diabetic population.

References

1. Scottish Intercollegiate Guidelines Network. 116. Management of diabetes- a national clinical guideline. <https://www.sign.ac.uk/assets/sign116.pdf> (accessed 17 August 2018).
2. Driver and Vehicle Licensing Agency. Diabetes mellitus: assessing fitness to drive. <https://www.gov.uk/guidance/diabetes-mellitus-assessing-fitness-to-drive> (accessed 15 October 2018).
3. Scottish Intercollegiate Guidelines Network. 154. Pharmacological management of glycaemic control in people with type 2 diabetes- a national clinical guideline. <https://www.sign.ac.uk/assets/sign154.pdf> (accessed 1 September 2018).