

A non-invasive frequent home blood glucose monitor

H Lenzen, BA Barrow, S White, RR Holman, FRCP *

Abstract

Attaining near-normoglycaemia in patients with diabetes is essential if diabetes-related complications are to be minimised. Attempts to optimise glycaemic control are often limited by the infrequent nature of current home blood glucose monitoring systems and fear of hypoglycaemia. We evaluated the potential benefit of the GlucoWatch® Biographer, a non-invasive glucose monitoring device designed to give a frequent measure of blood glucose and provide early warning of hypoglycaemia or hyperglycaemia, in five subjects with type 1 diabetes over a three week period.

Subjects found the device easy to use, obtaining 762 usable readings out of a possible 1168 (65%) although all experienced some degree of skin irritation. They felt that the device facilitated continuous blood glucose monitoring and thought that high and low glucose alarms were helpful. Subjects experienced between one and six hypoglycaemia alarms per day, usually 20 to 60 min before the appearance of clinical symptoms, and between zero and four hyperglycaemia alarms per day. The degree to which the device can improve glycaemic control remains to be evaluated. Copyright © 2002 John Wiley & Sons, Ltd.