LONG-TERM CLINICAL EVALUATION OF THE NEW ACCU-CHEK® DIAPORT, A PORT SYSTEM FOR CONTINUOUS INTRAPEITONEAL INSULIN INFUSION: 24-MONTH RESULTS

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ABSTRACT

The new Accu-Chek® DiaPort system is a newly designed and improved percutaneous port system for continuous intraperitoneal insulin infusion (CIPII). The aim of this study was to investigate the clinical long-term performance and safety of the new Accu-Chek® DiaPort system (figure 1). Compared to previous models, the new DiaPort has a substantially improved design, material, and implantation tools.

RESULTS

Surgical procedure, ingrowth, local or intraperitoneal tolerability, and function of the new Accu-Chek® DiaPort system were without major problems. Study participants were highly satisfied with handling and performance in daily life, and their quality of life was high. After 24 months, 10 patients (baseline HbA1c 8.8% (± 1.15% SD) were still using their Accu-Chek® DiaPort system. CIPII had to be stopped earlier in one patient because of progressive dementia (unrelated to the port), and in one patient due to a severe infection around the port. 4 other events of superficial infections could be controlled with oral antibiotic and local therapy.

BACKGROUND

In earlier studies, continuous intraperitoneal insulin infusion, CIPII, (via implantable pumps or percutaneous ports with external insulin pumps) has shown excellent clinical results in patients with type 1 diabetes: near-normal blood glucose regulation with extremely low numbers of hypoglycemia, and low variability of insulin action with reliable and fast insulin pharmacodynamics.

The new Accu-Chek® DiaPort system has been developed to be used for continuous intraperitoneal insulin infusion CIPII in patients with unsuccessful continuous subcutaneous insulin infusion, CSII.