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Short Communication

A Permanent Subcutaneous Catheter for Drawing Blood Samples and for Intravenous Fluid Therapy in a Diabetic Woman with Recurrent Ketoacidosis

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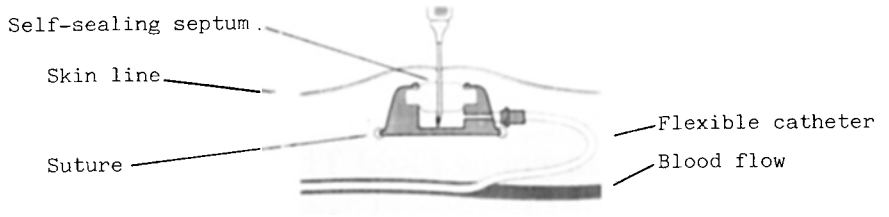
Access to a vein is a necessity for intravenous fluid therapy in diabetes mellitus with vomiting and ketoacidosis. We present a case report where this access has been gained by use of a permanent subcutaneously placed venous catheter. The use of this system has not been reported on earlier in the treatment of diabetes mellitus.

A 32 year old woman has had an insulin dependent diabetes mellitus since 1972. She has an immature personality, obesity and mild rheumatoid arthritis. The social situation is complicated. The patient has recently been admitted to hospital with increasing frequency because of recurrent vomiting and ketoacidosis (for example: blood glucose over 25 mmol/l, blood HCO_3 12 mmol/l, blood potassium 5.1 mmol/l, acetone bodies in the urine). The treatment has been more and more difficult technically because of the patients fear reactions and because of difficult access to the veins which are well hidden in the subcutaneous fat.

A subcutaneously placed drug and fluid delivery system for permanent use (Port-A-Cath) was inserted in December 1984 (Figure). The portal part of the system was placed over the right pectoral muscle in a subcutaneous pouch. The catheter was subcutaneously placed and introduced into the right jugular vein, with the tip situated in the superior vena cava. Thanks to this system, blood sampling and fluid therapy are now accomplished without problems. The patient and the hospital staff now feel more comfortable, and the ketoacidosis periods are less frequent! When not used the system is kept heparinised.



Port-A-Cath

Totally Implantable Drug Delivery System
Infusion cycle

The life span of a Port-A-Cath is not known, because it has only been on the market for 3 years. The system is mostly used in the treatment of malignant diseases, but also in many other diseases with urgent need for blood sampling as well as infusion of drugs, blood components and nutritional fluids. A total parenteral nutritional program can be administered through this system. The catheter can be placed in a vein, an artery or intraperitoneally.

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