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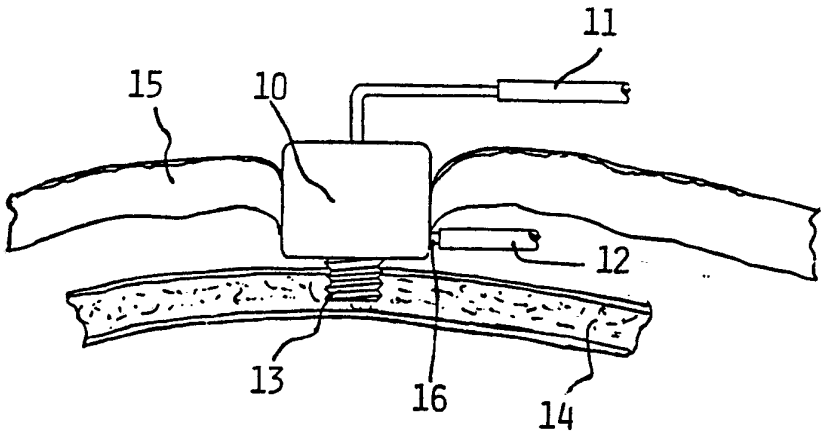

(57) Abstract

The invention relates to a cutaneous passageway with a passage system provided therein for connection of body cavities or body vessels to an apparatus, container or the like located externally of the body. On the cutaneous passageway there is provided means (13) for anchoring the cutaneous passageway to a bone or cartilage portion of the body.

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CUTANEOUS PASSAGEWAY

The invention relates to a cutaneous passageway having a passage system provided therein for connection of body cavities or body vessels to an apparatus, container or the like externally of the body.

Such a cutaneous passageway can be useful for example in providing a permanent connection to the abdominal cavity of individuals which undergo peritoneal dialysis.

The purpose of the invention is to provide an immobilized zone in the region where the cutaneous passageway penetrates the skin, in order to prevent the epitelium layer from migrating along the cutaneous passageway and thus penetrating into the skin, causing rejection of the cutaneous passageway as a consequence thereof.

For said purpose the cutaneous passageway of the invention has obtained the characterizing features according to claim 1.

In order to explain the invention in more detail reference is made to the accompanying drawing in which

FIG 1 is a side view of an embodiment of the cutaneous passageway of the invention mounted in the body which is fragmentarily shown in cross section, and

FIG 2 is a corresponding view of another embodiment of the cutaneous passageway of the invention.

In the embodiment of the invention, shown in the drawing, the cutaneous passageway is indicated generally at 10, and it has cylindrical shape. However, it can have any other shape. A passage system is provided in the cutaneous passageway and can be connected to an outer hose 11 as shown in the drawing but

can also be connected to an external coupling device, container, plastic bag, syringe, or any other apparatus. The passage system is connected also to an inner hose 12 which is extended to a suitable location in the body where liquid shall be supplied or drained. The hoses preferably consist of silicone or polyurethane of the highest medical quality.

In both embodiments the cutaneous passageway also has a threaded stud 13 by means of which the passageway is secured to a bone or cartilage portion 14 in the body, for example a rib or pelvis bone, the cutaneous passageway being located such that it extends through the skin 15. The cutaneous passageway can be constructed according to the Swedish Patent Application 8502829-8 in order to prevent the epitel from migrating downwards, and it should be made entirely of a biocompatible material or be coated with such material on the outside thereof, preferably titanium or a titanium alloy which has the ability to integrate in a biologically acceptable manner with bone or cartilage. Due to the fact that the cutaneous passageway is anchored to a solid substrate and preferably to a body portion having a minimum of subcutaneous fat, there is provided an immobilized zone in the region where the cutaneous passageway penetrates the skin, which further contributes to the prevention of downward migration of epitelium and thus rejection of the cutaneous passageway. The inner hose 12 is extended from a side connection 16 on the cutaneous passageway to be located subcutaneously.

According to FIG 2 the stud 13 forms a portion 13' in order to be a fastening member as well as a spacer. Moreover, the hoses 11 and 12 in this case comprise a continuous hose length which is passed through the cutaneous passageway.

It is not necessary to provide as anchoring means a stud as shown herein. Such means can also comprise a plate which is secured by means of screws or in another manner in engagement with the bone or cartilage portion.

CLAIMS

1. Cutaneous passageway having a passage system provided therein for connection of body cavities or body vessels to an apparatus, container or the like located externally of the body, c h a r a c t e r - i z e d in that means (13) are provided for anchoring the cutaneous passageway to a bone or cartilage portion of the body.

2. Cutaneous passageway as in claim 1 wherein the anchoring means (13) comprises a stud.

3. Cutaneous passageway as in claim 1 or 2 wherein at least the anchoring means (13) consists of or is coated with a biocompatible material, for example titanium or titanium alloy.

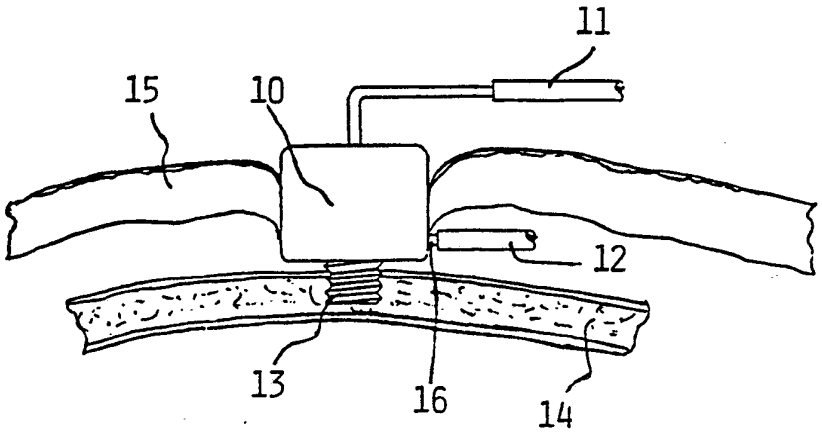

FIG 1

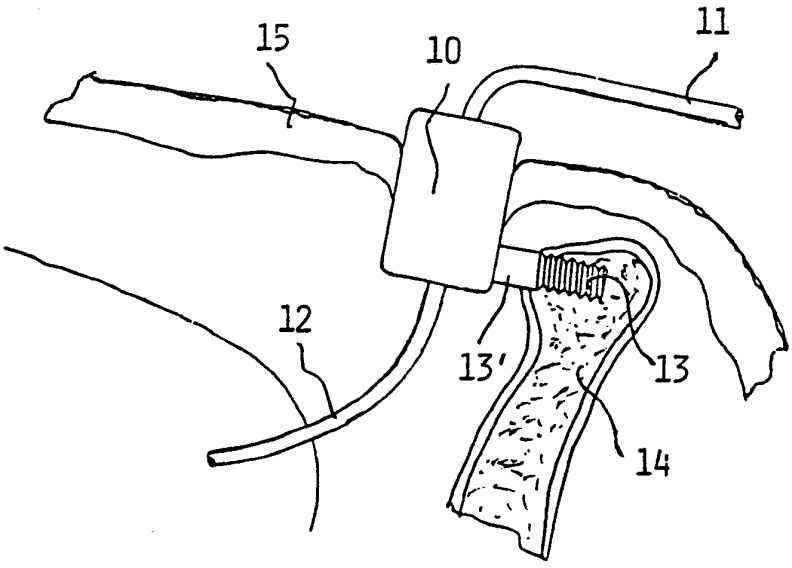

FIG 2

INTERNATIONAL SEARCH REPORT

International Application No PCT/SE89/00056

I. CLASSIFICATION OF SUBJECT MATTER (if several classification symbols apply, indicate all) [6]

According to International Patent Classification (IPC) or to both National Classification and IPC[4]

A 61 M 31/00

II. FIELDS SEARCHED

Minimum Documentation Searched [7]

Classification System	Classification Symbols
IPC 4	A 61 M 1/00, 1/02, 23/00-27/00, 31/00, 37/00, 37/04
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	604:27-29,41,42,51-53,93,96,158,160,175,267,283

Documentation Searched other than Minimum Documentation to the Extent that such Documents are included in the Fields Searched [8]

SE, NO, DK, FI classes as above

III. DOCUMENTS CONSIDERED TO BE RELEVANT [9]

Category [10]	Citation of Document, [11] with indication, where appropriate, of the relevant passages [12]	Relevant to Claim No. [13]
X	US, A, 4 629 451 (WINTERS ET AL) 16 December 1986	1-3

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IV. CERTIFICATION

Date of the Actual Completion of the International Search	Date of Mailing of this International Search Report
1989-02-28	1989 -04- 1[illegible]
International Searching Authority	**Signature of Authorized Officer**
Swedish Patent Office	Leif Vingård