

[54] URETHRAL INTRODUCTION CATHETER

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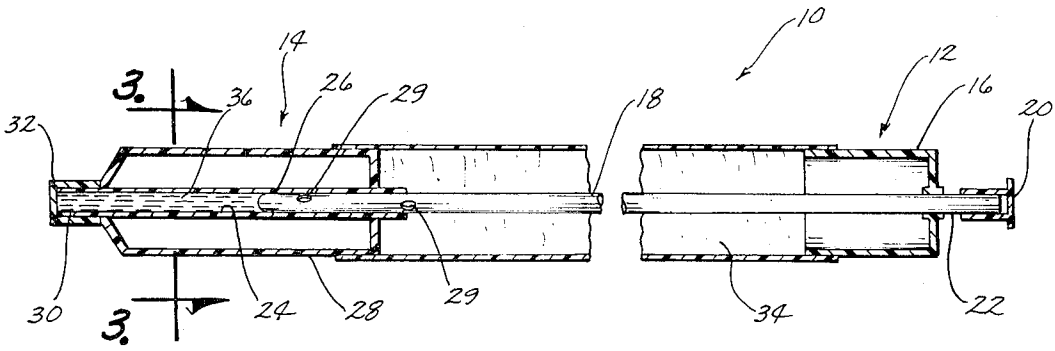
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[57] **ABSTRACT**

A urethral introduction catheter comprising an elongated flexible catheter fixed at its proximal end to a connector and having a cap removably mounted on the drain spout end thereof. The proximal end of the catheter slidably extends through an introducer having a predetermined quantity of water-soluble lubricant provided therein. The introducer is provided with an end portion through which the catheter passes. A flexible sheath is secured to and extends between the connector and introducer to maintain the catheter in a sterile condition. A cap is provided for sealing the introducer prior to use. The method of using the device is also disclosed.

7 Claims, 4 Drawing Figures



URETHRAL INTRODUCTION CATHETER

BACKGROUND OF THE INVENTION

This invention relates to a catheter and more particularly to a urethral introduction catheter wherein lubricant is moved through the urethra ahead of the catheter. Conventional catheters can produce urethral trauma and frequently subject the patient to pain and discomfort. Additionally, the conventional catheters are difficult to maintain in a sterile condition thereby resulting in patient infections. Further, the conventional catheters are difficult to use and require considerable time to use.

Therefore, it is a principal object of the invention to provide an improved catheterization.

A further object of the invention is to provide a urethral introduction catheter.

A further object of the invention is to provide a urethral introduction catheter wherein lubricant is moved through the urethra prior to the catheter tube.

A further object of the invention is to provide a urethral introduction catheter including means for maintaining the sterile condition thereof.

A further object of the invention is to provide a urethral introduction catheter which eliminates the need for a catheter tray.

A further object of the invention is to provide a urethral introduction catheter which eliminates the need for sterile gloves or sterile field.

A further object of the invention is to provide a urethral introduction catheter which reduces urethra trauma.

A further object of the invention is to provide a urethral introduction catheter which reduces the possibility of the introduction of foreign pathogens into the bladder.

A further object of the invention is to provide a urethral introduction catheter which is simple to use and which saves time.

A further object of the invention is to provide a urethral introduction catheter which is economical of manufacture and refined in appearance.

These and other objects will be apparent to those skilled in the art.

BRIEF DESCRIPTION OF THE DRAWINGS

This invention consists in the construction, arrangements and combination of the various parts of the device, whereby the objects contemplated are attained as hereinafter more fully set forth, specifically pointed out in the claims, and illustrated in the accompanying drawings, in which:

FIG. 1 is a perspective view of the urethral introduction catheter of this invention;

FIG. 2 is a sectional view of the catheter seen along lines 2—2 of FIG. 1;

FIG. 3 is a sectional view seen on lines 2—2 of FIG. 2; and

FIG. 4 is a side elevational view of the catheter illustrating the catheter tube having been extended through the introducer.

DESCRIPTION OF THE PREFERRED EMBODIMENT

The numeral 10 refers generally to the catheter device having a proximal end 12 and a proximal end 14. A connector 16 is provided at the proximal end of the

device and has one end of the catheter 18 secured thereto and extending outwardly therefrom. The numeral 20 refers to a cap which is removably mounted on the proximal end of the drain spout portion 22 of the catheter 18.

The other end of the catheter 18 is slidably mounted in a bore 24 of a tube 26 which is secured to the introducer 28. Catheter 18 is provided with suitable openings 29 at its proximal end. Tube 26 extends outwardly from the proximal end of the introducer 28 to define an introducer end portion 30. The numeral 32 refers to a cap which is removably mounted on the introducer end portion 30 as seen in the drawings.

A flexible sheath 34 is secured at its proximal end to the connection 16 by heat sealing or the like and is secured at its proximal end to the introducer 28 by heat sealing or the like. As seen in the drawings, when the sheath 34 is in its extended condition, the proximal end of the catheter 18 extends into the proximal end of the introducer 28. The numeral 36 refers to approximately 0.5 cc water-soluble lubricant which is positioned in the bore 24 ahead of the proximal end of the tube 18. Preferably, the catheter 18 is constructed of a polyvinyl chloride or rubber material while the connector 16 is comprised of a polypropylene material. The sheath 34 is preferably constructed of a polyethylene material while the introducer is preferably constructed of a propylene material.

The method of using the catheter is as follows. The catheter device would be previously sterilized and would be enclosed in a sterile paper package or the like. The device 10 is removed from the package and the patient is prepared for the procedure. The urethral meatus is cleaned and the protective cap 32 is removed from the introducer end portion 30. The introducer end portion 30 is then inserted approximately $\frac{3}{8}$ inch into the urethra. The nurse then holds the introducer 28 and the genitalia and grasps the catheter 18 through the polyethylene sheath 34. The catheter 18 is then gently slidably moved outwardly from the introducer 28 into the urethra. When the catheter has been inserted to a depth of approximately 9 inches (male) or approximately $1\frac{1}{2}$ inches (female) the drain cap 20 is removed from the spout portion 22 and the specimen is collected. It can be seen that the water-soluble lubricant is pushed into the urethra by the catheter 18 so as to lubricate the urethra to assist the insertion of the catheter.

The water-soluble lubricant substantially reduces urethral trauma and greatly decreases the pain experienced by the patient. Further, the catheter of this invention is maintained in a sterile condition and substantially reduces patient infections. The catheter may be slidably extended into the urethra without the nurse coming into direct contact with the catheter which eliminates the need for sterile gloves or a catheterization tray.

Thus it can be seen that a unique catheter has been provided and which accomplishes at least all of its stated objectives.

I claim:

1. A urethral introduction catheter comprising, an elongated flexible catheter having distal and proximal ends, a connector secured to said catheter adjacent the proximal end thereof,

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said catheter having a drain spout portion extending from said connector,
 an introducer having a catheter introducer end portion extending therefrom,
 a sterile lubricant in said introducer,
 the distal end of said catheter being movably received by said introducer and slidably received by said introducer end portion so that the sterile lubricant is pushed from said introducer into the patient's urethra as the catheter is inserted into the patient's urethra,
 and a flexible sheath secured at its proximal end to said connector and secured at its distal end to said introducer.

2. The apparatus of claim 1 wherein a first cap means is removably mounted on said drain spout portion.

3. The apparatus of claim 1 wherein a second cap means is removably mounted on said introducer end portion.

4. The method of catheterizing a patient comprising the steps of:

providing an introducer having a passageway formed therein containing a sterile lubricant normally stored therein, said introducer having an end portion adapted for insertion into the patient's urethra, said introducer having an opposite end which is adapted to receive a catheter tube, the relationship of the catheter tube and said introducer passageway being such that the catheter tube will eject the lubricant from said passageway as said catheter tube is moved therethrough,
 inserting said introducer end portion into the patient's urethra,
 moving the catheter tube through said passageway so that the sterile lubricant is ejected from said introducer into the patient's urethra as the catheter tube

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is inserted therein,
 said catheter tube pushing said lubricant from said introducer simultaneously with the insertion of the catheter tube into the urethra.

5. A urethral introduction catheter comprising, an elongated flexible catheter tube having distal and proximal ends,
 a connector secured to said catheter tube adjacent the proximal end thereof,
 said catheter tube having a drain spout portion extending from said connector,
 said catheter tube having at least one opening formed therein adjacent its distal end,
 an introducer having a bore extending therethrough, said introducer including an end portion, said bore communicating with said end portion, the distal end of said catheter tube being slidably received by said bore,
 a flexible sheath secured at its proximal end to said connector and secured at its distal end to said introducer,
 a sterile lubricant positioned in said bore between the distal end of said catheter tube and said introducer end portion,
 the relationship of said bore and said catheter tube being such that said catheter tube will push said lubricant from said bore into the patient's urethra as the catheter tube is slidably extended through said bore.

6. The apparatus of claim 5 wherein said catheter has an outside diameter substantially equal to the inside diameter of said bore to prevent said lubricant from entering said opening in said catheter.

7. The apparatus of claim 5 wherein said lubricant comprises a water-soluble lubricant.

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