

NON INVASIVE FEMALE URINARY CATHETER TO AVOID INFECTION WHEN PATIENT IS IN SUPINE POSITION

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ABSTRACT

A non-invasive urine collecting device for female patients in supine or coma positions comprises a urine receiving member positioned between the legs perpendicular to urethra orifice. A concave shaped semi flexible device designed with number of spikes to prevent urine splash back and to direct it towards urine outlet channel. The vaginal anchoring support balloon will be inflated through the non –return air inlet valve with a measurable air pressure. Inflated balloon forms a comfortable cushioning inside vaginal opening area gripping the device with the surface. The vaginal shaped boundary of the device supported by the labia folds avoiding the outflow and thus makes the urine flow in to the outlet channel through the tube connected to urine drainage bag.

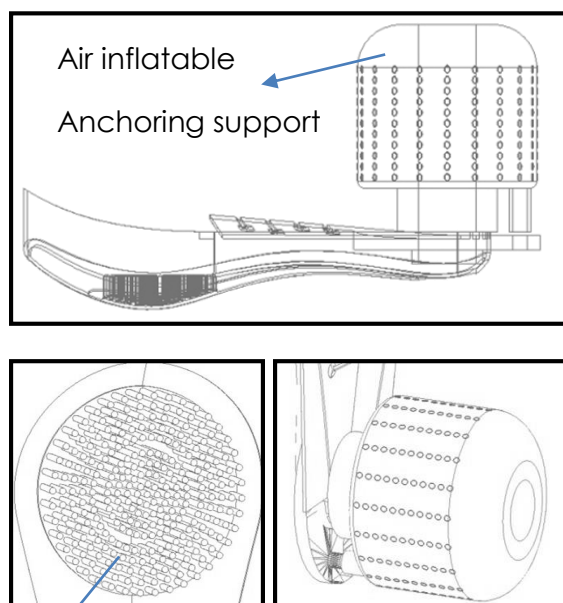


Fig 1. Urine collection device model

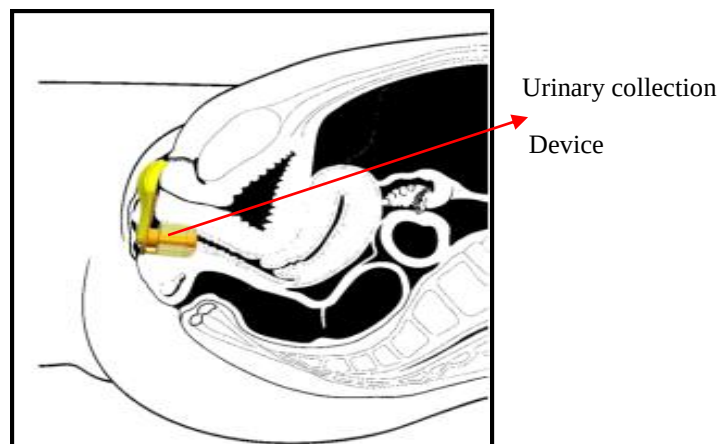


Fig 2. Sectional view describing the device mounting on the female body

DESCRIPTION

BACKGROUND OF THE INVENTION

1. Field of the Invention

The present invention relates to Urine collecting device for female patient in coma/supine condition.

2. Description of the Prior Art

Urinary incontinence is the loss of bladder control, resulting in the accidental loss or leakage of urine. Involuntary discharge of urine is a serious problem with female patients who cannot control their bladder. Most commonly observed in elderly patients who are confined to bed by serious trauma, severe illness and too weak to go to the toilet in the normal way. Solving this issue, numerous types of such devices have come up, viz: folly catheter, Cup type, diaper type etc. However, controlling the infection and reducing the discomfort with the unique product was a challenge. The present invention solves the problem in a satisfactory manner with this device.

SUMMARY OF THE INVENTION

The current invention is focuses non-invasive urinary collection device equipped with a concave shaped body located over the urethral orifice to control the urine splash. Discharged urine gets trapped in anti-splash spikes and directed to the outlet by guide channel provided on the internal surface. Geometry of the device aids in providing a slight grip to labia majora and labia minora. Once the device is placed over urethral orifice optimal amount of air is passed to an inflatable balloon through a non-returnable valve which inflates and provides a vaginal anchoring support. Dotted surface on the balloon ensures the grip in vaginal opening.

The device has unique ability of self-adjusting to urogenital diaphragm owing to its semi flexible nature. Also Anti-allergenic and unirritative to ensure better prolonged usage. Major highlight of this device is its compactness, leak proof even patient in supine positions and easy insertion in to urogenital diaphragm to facilitate comfortable anatomical fitting.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a Side view of a urinary collection device of the current invention.

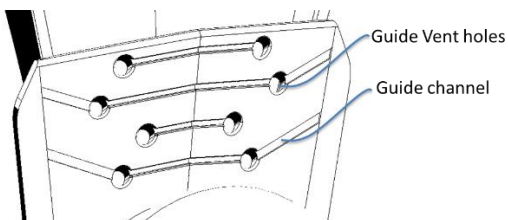


FIG. 3 is a partial sectional view of the urinary collection device.

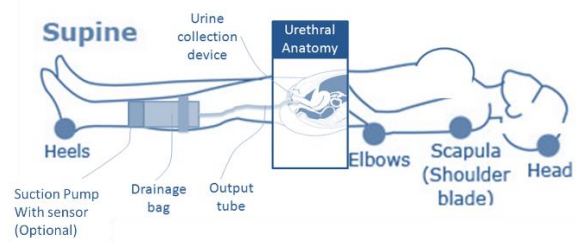


FIG. 4 is a full view showing a female patient in supine position with the urine collection device in place.

CLAIMS

1. A female urine collection device comprises of:

- a) Semi flexible housing
- b) Receiving chamber positioned within the above said device including inlet and outlet. Inlet chamber provides an enclosed sealing around the urethral orifice of a female.
- c) Convolute geometry which provides easy flow of urine. The shape of the body itself acts as a directing channel of urine from input to output
- d) Device has Urine presence detection sensor with motorized suction pump which is a unique feature (optional) provided to collect urine and keep the area clean and dry

2. A urine collection device according to claim 1 said urine Splash back is controlled by concave shaped receiving chamber

3. Chamber is provided thereof with a compressible wall portion following the labia folds for sealing around the urethral orifice of a female.

4. The receiving chamber is equipped with group of spikes on the concave body to avoid splash back due to incoming urine jet flow

5. Semi flexible Pad with vent holes which takes the shape of vestibule curvature is placed in front of chamber to avoid urine leakage.

6. Bottom portion of the product provides vaginal anchoring. Bottom portion of the product comprises of semi flexible tube and non-returnable valve to block vaginal or urine discharge entering vagina

7. Flexible dotted inflatable balloon is placed on the vaginal anchoring tube helps in providing the grip throughout vaginal entrance

8. Optimal air will be passed to a deflated balloon through a non-returnable valve until comfortable grip is established between vaginal surface and dotted balloon based on the individual's size, space and expandable property available in vaginal opening.

9. Urine is sucked out with suction pump from downstream of the product through flexible tube to urine drainage bag