REUSABLE NON-INVASIVE DEVICE FOR FEMALE SUPINE MICTURITION

Description

The use of external urine-collecting devices such as bedpans is well known, allowing urine to be collected in the recumbent position. One of the main drawbacks of wedges is that their design is not adequately adapted to the female anatomy. Consequently, their use for the collection of female urine may lead to sustained pressure injuries and wetting injuries related to leakage of body fluid. The use of wedges may also increase the number of urinary retention related to incomplete bladder emptying due to incorrect positioning.



Research staff from the Universitat Jaume I and the Foundation for the Promotion of Health and Biomedical Research of the Valencian Community (FISABIO), belonging to the Department of Industrial Systems Engineering and the Nursing Service of the Health Departments of Alcoy and Xàtiva-Ontinyent, respectively, have collaboratively developed a urination device for women in the supine position, which facilitates the flow of fluid out of the device and prevents spillage. The devices known to date have had sealing problems, causing leaks due to poor sealing and fixation, as well as comfort problems.

The particular configuration of the invention avoids spills in the use of the device as it is specifically designed for the female anatomy and used in the supine position, which do occur in other known urination devices due to lack of fit and tightness; and due to the Coanda effect, which occurs due to the tendency of the fluid flow to adhere to a nearby surface, generating unwanted spills, as well as skin irritation and difficulty in directing the flow accurately. The device is simple, inexpensive, non-invasive and reusable. It does not need to be left in place as it is only used at the time of urination, is configurable for various sizes and is adjustable to any collection device.



Technical Advantages

Designed specifically for women's anatomy.

- Avoids fluid leakage and its associated risks.
- Non-invasive.
- Comfortable.
- Configurable in various sizes.
- Applicable to various pathologies.
- Simple, economical and reusable (sustainable).
- Product considered hygienic (not necessarily a medical device).

The industrial and business application sectors of interest are:

- Industries manufacturing and marketing micturition devices (injection, blowing).
- Companies manufacturing/marketing hygienic products.

Current State of Development & Intellectual Property Rights

Validated on an experimental scale in the laboratory environment.

Invention protected by Spanish patent application with reference number P202330948 and filing date 16-11-2023.

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