

The Possibility of Urethra Pipelined to Solve the Problem of Neurogenic Bladder

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Case Study

Neurogenic bladder, is a dysfunction of the urinary bladder due to disease of the central nervous system or peripheral nerves involved in the control of micturition [1]. Neurogenic bladder usually causes difficulty or full inability to pass urine without use of a catheter or other method. Its treatment involves Catheterization, creation of a stoma or somatic-autonomic reflex arc [2-4]. There are a lots of side affects about the above the methods. Catheterization needs to regularly replacement of a catheter which costs patients a lot of time and money and makes them inconvenient to normal daily life. Somatic-autonomic reflex arc may not work for parts of time and its effect is not very obvious. So, for solving this problem, we create a method without the needs to carry a urine collection bags by urethra pipelined. As is known to all that uroschesis is more harmful than the urinary incontinence for they may reduce the renal function by causing hydronephrosis. So, firstly, we need convert the uroschesis of the neurogenic bladder into completely urinary incontinence, this process was called urethra pipelined. Then, the clothes designed by elasticized bandages can be used for completely urinary incontinence. With the pressure outside the urethral canal by the clothes, the micturition can completely controlled by taking off the clothes or dressing it. A rabbit was used to test the possibility of the methods. The nerve around the bladder was destroyed and then residual urine was estimated of several milliliters. After the surgery, urethral dilator was used to expand the diameter of the urethra, a hard conduit of maximum diameter the was insert into to the bladder and then fixed to the body. Five days later, the saline was input into the bladder by the conduit and the conduit was then pulled out. All the saline could flowed out of the bladder by the expanded urethra. Finally, saline was input into the bladder and then the clothes made from elasticized bandages was used to give the pressure to the urethra, and then the voiding was stopped; while loosen the clothes, the micturition began as well.

In conclusion, the urethra pipelined may be a possible approach to the problem, although it needs more study.

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