

INTRODUCTION AND AIM OF THE STUDY

Spinal cord injured patients with **sacral and sub-sacral lesions** usually present with **detrusor hypo/acontractility**; often patients are instructed to perform clean intermittent self-catheterization (CIC). Main complications related to CIC are urinary tract infections (UTI) and **urethral injuries** (urethral bleeding, false passage and urethral strictures).

There are no data available about the **relationship between the development of skin pressure ulcers (ischiatric especially), urethral erosion and resulting fistulas**, in patients with neurogenic bladder dysfunctions undergoing CIC.

MATERIALS AND METHODS

All patients were diagnosed of neurogenic bladder due to spinal cord injury and performed CIC.

Every **symptomatic UTI was treated** with antimicrobial agents.

The diagnosis was made by the **plastic surgeon** after the development of a **skin pressure ulcer in the ischial region**, not responsive to conservative topical treatment and requiring surgical toilette. With the use of metilene blue solution injected into the ulcerating lesion, we evidenced the contextual emission of bluish urine. The diagnose was confirmed by radiologic **fistulography** with contrast medium injected into the ischial lesion and also with **retrograde urethrography**.

RESULTS

We account **8 cases** during the last 2 years.

All patients were **male**, performing CIC without difficulties for **more than 5 years**.

No urethral pathology was present.

Mean age was **55 years** (46 to 73). **One** patient had **diabetes** and **2 patients** were **obese**.

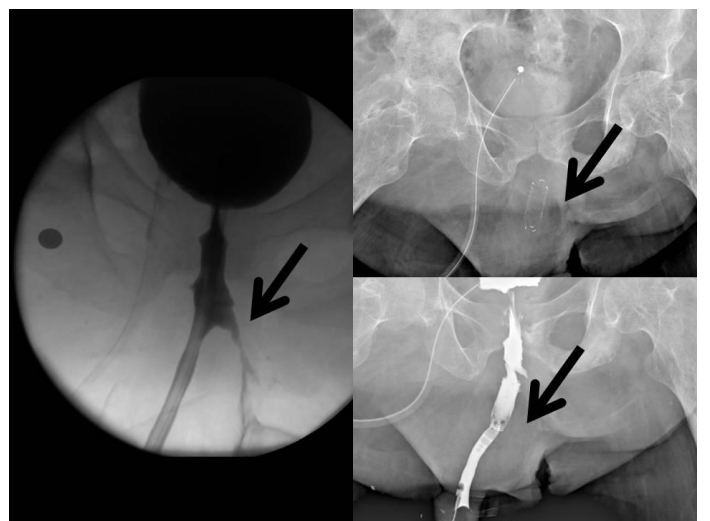
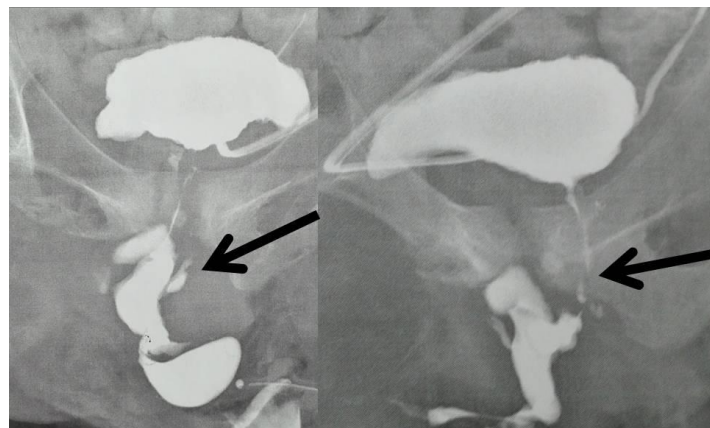
One patient was treated (15 years ago) for an **urethral diverticulum** and had well healed urethra with just a millimetric gap.

The **2 youngest patients** were initially treated with **surgical urethral reconstruction with buccal mucosal graft**, with good results (fig. 1). One of them was treated with a **second surgical revision** for persistence of a small residual fistula. The follow-up with cistouretrography did not reveal any fistula nor stenosis.

Two patients were treated with **new generation urethral stents** (E.g. Uventa™, fig.2). **One was removed after 6 months** with **complete closure** of the fistula and absence of stenosis. The other is **still in place**; the contrastographic control after 1 month evidenced significative reduction of the fistula with filiform appearance. At the contrastographic control at **2 months**, we evidenced a **displacement** of the stent with persistence of the fistula and worsening of the ischial ulcer. The patient underwent subsequent ulcer toilette and **repositioning** of the stent, with subsequent substitution with a **longer stent** to prevent its displacement.

For the **4 older patients** we placed a **permanent sovrapubic catheter**, excluding the urethra.

We had **no septic complication**.



INTERPRETATION OF RESULTS

We still do not know what is the actual relationship between the CIC maneuver and the development of the fistula. One hypothesis is that the **ischiatric decubitus is the origin of the disease**, that consequently spreads to a chronically inflamed and frail urethra. Another hypothesis is that the **process is initiated at the site of a false passage** with urinal stasis and subsequent infection of the injured urethra, and subsequent spread of the inflammatory process towards the ischial region. Furthermore we have to consider the **chronic bacterial contamination of the urethra** of patients performing CIC. **Traumatic CIC is difficult to come to medical attention** as usually patients have lack of sensibility, underestimate blood traces in the tip of the catheter or do not refer hematuria. In both cases it is warranted a **correct and well-trained CIC maneuver and prevention of cutaneous decubiti with adequate aids**.

CONCLUSIONS

Ischial-urethral fistulas are **rare complications**, but **warrant prompt treatment**. In any case of **high-grade ischial cutaneous lesion**, a possible urethral involvement should be ruled out. Surgical urethral reconstruction may be a difficult solution in a patient spending his life sitting on a wheel chair, but **new generation stents** (E.g. Uventa™) could be a valid and safe alternative with little invasiveness.