Short report

Benign transient urinary retention

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SUMMARY Three cases of acute urinary retention due to sacral myeloradiculitis are described. The authors stress the importance of diagnosing this rare and benign condition, which, in the past, has too often been mislabelled as either psychogenic or the first manifestation of a demyelinating disease.

Psychogenic disturbances have often been considered the most common cause of acute urinary retention when it occurs as an isolated sign in a young adult. On the other hand, it is sometimes considered as the first symptom of an important disease, such as multiple sclerosis. As they are rarely described in the neurological literature,^{1 2} we present three cases of benign sacral myeloradiculitis and stress the importance of not overlooking minor symptoms and signs such as transient paraesthesiae and small areas of hypaesthesiae.

Case reports

Case 1 A 32 year old man suddenly noticed penile paraesthesiae. Two days later, he developed a cough and fever (38°C). On the fourth day he developed acute retention of urine with constipation and decreased potency. He also complained of paraesthesiae in the outer borders of both feet. He had no relevant past history and in particular, no history of previous disturbances of micturition or diabetes. On admission the same day, the general physical and urological examinations were normal apart from retention. No herpetic vesicles were noted. The only neurological abnormality was reduced and asymmetrical ankle reflexes. Cystoscopy revealed a large but otherwise normal bladder. At gas cystometry, the raise of intravesical pressure with increased bladder filling was normal. Urethral pressure profile and electromyography of the external sphincter were not performed. Myelography was normal. In the CSF, there were 52 lymphocytes/mm³ and a protein content of 0.71 g/l. CSF VDRL test and protein electrophoresis were normal. Bacteriological and viral studies were negative in blood and CSF and remained negative on the 17th day. The patient was

managed with suprapubic catheter and after 7 days was able to pass urine normally. The ankle jerks returned to normal. The patient has remained well during the 5 years since then.

Case 2 A 41 year old healthy woman complained of dysuria for 15 days. Five days before admission, she developed paraesthesia and pain of the left calf with general lassitude and slight fever. On admission, she was in retention and was constipated. There was no relevant past history. The external urogenital tract was normal apart from a vulvar mycotic infection. The only neurological abnormality was reduced sensation over the outer border of the left foot. Cystoscopy showed reduced mobility of the bladder neck during efforts to start voiding. Intravenous urography and gas cystometry were normal. Urethral pressure profile and electromyography of the external urethral sphincter were not performed. CSF contained 24 white blood cells/mm³, with 71% lymphocytes. Total protein was 0.6 g/l. CSF VDRL and protein electrophoresis were normal. Viral studies revealed fluorescent antibodies to herpes I and II decreasing from 1/320 (day 2) to 1/80 (day 26). The complement fixation test remained within normal limits, both in serum and CSF. After 10 days, the patient was able to pass urine normally. The patient has remained asymptomatic for 4 years.

Case 3 A 27 year old woman, a ski champion, had a one month history of rhinorrhoea, non productive cough and lassitude without fever. Six days before admission she noticed paraesthesiae in both buttocks. Two days before admission, she developed painful difficulty in passing urine, and on admission she was in retention. Gynaecological, neurological, as well as general examinations were normal. Cystoscopy was normal. Water cystometry showed a normotensive bladder without any sign of instability. Urethral pressure profile was normal. Electromyography of the external urethral sphincter performed a few days after admission showed a normal resting activity; attempts to void produced a decreased electrical activity which was considered to be within normal limits. The CSF contained 40 white blood cells/mm³, with 92% lymphocytes and 3% atypical lymphocytes; total protein was 0.34 g/l. CSF VDRL and protein electrophoresis were normal. Cultures and antibody tests in both serum and CSF were repeatedly negative for influenza

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A and B, parainfluenza, adenovirus, mycoplasma, mumps, measles, rubella, herpes simplex and zoster, CMV, EBV, polio, coxsackie, echo and enteroviruses. IgG and IgM for toxoplasmosis were also negative. After 15 days, she was able to pass urine normally and has remained well during the year since then.

Discussion

Determination of the aetiology of acute urinary retention in young adults may be challenging to both urologist and neurologist. Local urological and gynaecological conditions, and drug-induced urinary retention should first be excluded. Neuropathies, especially in diabetes, neoplastic invasion of the sacral nerves, expanding lesions of the conus medullaris, the cauda equina and the spinal cord, especially by disc protrusion and tumour can be excluded by clinical examination, biological tests and radiological investigations, as in our three patients.

In young patients, multiple sclerosis should also be considered. However, bladder dysfunction was found the sole initial symptom in only 2% of multiple sclerosis patients.³ Tourtelotte⁴ stressed that the total white cell count in the CSF is less than 16/cu mm in 95% of patients with multiple sclerosis. In our patients the CSF cell counts were greater than this. The absence of signs indicating CNS involvement, the normal CSF protein electrophoresis and the follow-up without recurrence (more than 4 years in our two first patients) also strongly argue against multiple sclerosis.

When the local and neurological examinations are normal, psychogenic disturbances are usually considered the most likely cause.⁵ However, very careful examination may show areas of dysaesthesiae or hypaesthesia in the sacral dermatomes, as well as asymmetry of the ankle reflexes.

Ano-genital herpetic vesicles should be looked for carefully and occult herpetic infection of the cervix and rectum should also be investigated. No cutaneous or mucosal lesions have been noted in our three patients, even at cystoscopy. A lumbar puncture is then mandatory: when showing lymphocytosis, myeloradiculitis of presumed viral origin should be considered. The disease appears most frequently as a complication of herpes simplex.⁶ But, since the first description of combined acute urinary retention and CSF pleocytosis, known as the Elsberg syndrome, in 1931, few cases of non-herpetic sacral myeloradiculitis have been reported in the literature.^{1 2 7 8} This syndrome, which occurs in young healthy males or females, is characterised by a history of infectious illness and the subsequent development of acute urinary retention. All the authors stress that the neurological symptoms and signs are mild, or even absent, and should be looked for carefully. In all cases

described so far, the urinary retention has always been of short duration (between 3 and 15 days) and has never recurred.

Although the clinical presentation and the CSF lymphocytosis are in favour of a benign infectious radiculitis, the nature of the responsible agent is often unknown. Vanneste *et al*¹ identified ECHO 9 virus as the definite viral agent in one of their three cases. Cytomegalovirus and Epstein Barr virus have also been previously reported.^{7 8} Indeed, any neurotropic virus can lead to sacral myeloradiculitis.⁹ Cultures, as well as repeated antibody tests in both serum and CSF remained negative in our three patients. The low and decreasing herpes I and II fluorescence rates and the negative complement fixation tests are against this aetiology in patient 2.

Strangely, cystoscopy and urodynamic studies as well as electromyography of the external urethral sphincter showed no abnormality apart from residual urine, findings that have been observed by other authors.¹

Sacral myeloradiculitis, or viral origin, should be considered in young patients with urinary retention. CSF analysis leads to the diagnosis. A lumbar puncture should be performed as soon as urological and gynaecological causes have been excluded. Early recognition of this syndrome should reduce unnecessary diagnostic procedures, and would avoid the mistaken diagnosis of psychogenic urinary retention. The prognosis is good.

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