Syringomyelia in an older patient

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Abstract

We describe the case of an 80-year-old man who presented with lower limb upper motor neurone weakness and spinothalamic tract sensory deficit secondary to previously undiagnosed syringomyelia. The case highlights the need for methodical history, examination and investigation in elderly patients to achieve diagnostic accuracy.

Keywords: syringomyelia, syrinx, older people

Case report

An 80-year-old, previously independent, Caucasian man with a background history of ischaemic heart disease, hypertension, benign prostatic hypertrophy and osteoarthritis, requiring previous right knee and left hip replacement surgery, presented with a 1 day history of ‘shooting’ pain and spasms affecting the right leg and decreased mobility. Two weeks previously he suffered with self-limiting diarrhoea and vomiting secondary to viral gastroenteritis. He described progressive deterioration in mobility for 1 year and had fallen once. He was compliant with aspirin, bisoprolol, ramipril and omeprazole, did not smoke cigarettes or drink alcohol and had no significant family history.

Cardiorespiratory, abdominal and upper limb neurological examination were unremarkable. Examination of his lower limbs revealed surgical scars and bilateral upper motor neurone weakness (4/5), hypertonia, hyper-reflexia and reduced sensation to temperature and pin prick but preserved light-touch and proprioception. Laboratory investigations and brain imaging were unremarkable. Spinal MRI diagnosed a septated syrinx at T7-9 with an atrophic cord at that level and showed evidence of degenerative spinal disease (Figure 1). The patient was managed conservatively with multidisciplinary rehabilitation. His pain and mobility improved and he returned to his independent lifestyle with expectant spinal surgical follow-up.

Discussion

Syringomyelia is a disorder in which a fluid-filled cavity (syrinx) forms within the spinal cord. It may be congenital or acquired, has a prevalence of 2–18 cases per 100,000 people (with significant ethnic variation), and usually presents in early adulthood, with insidious disease progression [1, 2]. The aetiopathogenesis of syrinx formation is not fully elucidated but is suggested to be due to an interaction between abnormal cerebrospinal fluid (CSF) hydrodynamics and intramedullary cord pressures with a number of theories having been described, often focusing on obstruction to CSF flow in the subarachnoid space [3–6]. The syrinx may expand and elongate over time resulting in atrophy of the spinal cord, producing a variety of neuropathic symptoms depending on the level of involvement. Our patient suffered lower limb upper motor neurone weakness and dissociated sensory loss with spinothalamic deficit secondary to a thoracic syrinx. In contrast to the dorsal column tract, the spinothalamic tract, which carries pain and temperature sensation fibres, is more commonly involved as the fibres decussate in the anterior commissure making them more susceptible to a shearing effect during syrinx formation [7].

Syringomyelia is rarely a primary disease process, and usually occurs secondary to other disease processes, most commonly extrinsic compressive lesions at the craniovertebral junctions, such as the Chiari malformation. In the absence of such lesions, syringomyelia is often associated with spinal injury or inflammation [8]. These conditions had not previously affected our patient, but he did have evidence of significant degenerative spinal disease. While the combined presentation of these processes may be coincidental, cases of cervical degenerative spinal
disease and syringomyelia have been described previously with the former suggested to be contributory as a result of subarachnoid space stenosis related to osteophytic disease [8]. Indeed, it has been postulated that the development of syrinx formation within the cord may provide a protective phenomenon. While the degree and/or duration of CSF obstruction from degenerative spinal disease are not usually enough to result in syringomyelia, it is interesting to note, however, that syrinxes have been demonstrated in radiological population studies of individuals with normal neurological findings [2,9]. Valsalva manoeuvres, such as coughing and straining, have been demonstrated to increase subarachnoid fluid pressure and precipitate acute presentation of previously asymptomatic syringomyelia and this patient’s presentation soon after acute gastroenteritis with repetitive straining would be consistent with such a hypothesis [10]. Alternatively, his presentation at this time and improvement with conservative management may suggest functional decompensation in the setting of acute illness.

Key points

- Syringomyelia may present in the older patient.
- Syringomyelia is likely to be under-investigated in older patients but is treatable.
- Comprehensive geriatric assessment is crucial to achieve diagnostic accuracy.

Conflicts of interest

None declared.

References


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Figure 1. T2-weighted sagittal MRI of thoracolumbar spine.

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