Girdle Sensation Masquerading as Splanchnopathy in Neurosarcoidosis

Key words: sarcoidosis, neuropathy, girdle sensation, splanchnopathy, radiculopathy

Girdle sensation is expressed as a sensation of the trunk being tightened with a band, one of the manifestations of polyradiculopathy as well as spinal cord diseases. In the spinal cord, the posterior column or posterior horn is the site responsible for the girdle sensation. Thus, multiple sclerosis (MS), subacute combined degeneration of the spinal cord, and compression myelopathy preferentially affecting those structures are the common causes of girdle sensation. In cervical spondylotic myelopathy, girdle sensation of the mid-trunk is well known as a false localizing sign (1), yet its mechanism remains unclear. Opticospinal MS in Asians severely affects the spinal cord and so girdle sensation sometimes causes patients to painfully suffer and some complain of epigastralgia mimicking gastric ulcers or dyspnea. Usually, however, other signs indicating a spinal cord disease, such as hyperreflexia, pathological reflexes, disturbance of superficial and deep sensations with sensory levels, accompany the condition. However, even in such cases with established spinal cord diseases, exacerbation of girdle sensation alone may make their doctors consider gastroenterological examinations.

Girdle sensation may occasionally appear by itself without long tract signs, and in such cases thoracic radiculopathies could be responsible for it. In the absence of associated neurologic symptoms and signs, it is difficult to even suspect a possibility of radiculopathy as an underlying cause, and so such cases may thus be misdiagnosed as cases of splanchnopathy, for example, appendicitis, gastroduodenal ulcer, various enteropathies, ischemic heart disease, pleurisy, pulmonary diseases and so on. Yakushiji et al (2) reported an unusual such case in this issue.

See also p 647.

Diabetic thoracic radiculopathy is probably the most common cause for this isolated segmental dysesthesia of the trunk (3), while post-herpetic neuralgia or sensory ganglionopathy may also manifest girdle-like dysesthesia; however, their case turned out to be sarcoid polyradiculopathy affecting the 8th to 12th thoracic roots.

Neurological symptoms appear in approximately 5% with sarcoidosis (4), which shows extremely variable manifestations. Sarcoidosis can affect all parts of the nervous system in addition to myopathy; that is, peripheral nerves, spinal roots, spinal cord, cranial nerves, brain and meninges. In peripheral neuropathies, cranial neuropathy is most frequently seen (4, 5), and sensory symptoms are more common than motor symptoms in neuropathy (4, 5). Sarcoid radiculopathy seems rather rare.

According to previous reports, girdle sensation ordinarily appears as part of manifestations of sarcoidotic polyradiculoneuropathy, presenting as acute or subacute motor and sensory polyradiculoneuropathy, like Guillain-Barré syndrome (6). However, the case reported by Yakushiji et al (2) developed solely abdominal girdle-like tight sensation at the very beginning and it persisted for over one month. In such cases, extensive gastroenterological examinations and various gastroenteric drugs are usually tried, but in vain. Without extraneurological symptoms, a diagnosis of sarcoidosis is often extremely difficult.

Yakushiji et al (2) collected seventeen cases with sarcoidosis presenting segmental sensory impairment at the trunk. As summarized by them, in more than half of these cases sensory impairment of the trunk developed as the initial manifestation of sarcoidosis; therefore, some were initially misdiagnosed with abdominal splanchnopathy. It is thus important to understand that girdle sensation may herald polyradiculoneuropathy associated with sarcoidosis. Chest CT together with measurement of the serum angiotensin-converting enzyme level may help to arrive at an early diagnosis of sarcoidosis even in those with negative spinal MRI findings, once there is a suspicion of sarcoid polyradiculopathy. Knowledge of isolated girdle sensation caused by thoracic polyradiculopathy is necessary not only for neurologists but also for all clinicians having the possibility of seeing patients with sarcoidosis as well as diabetes mellitus.

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References


