



## Some Thinking Triggered by a Young Patient with Severe Cervical Spinal Cord Compression

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### Abstract

Cervical spondylosis is currently one of the very common clinical diseases. According to our observation, more and more young people suffer from cervical spondylosis on account of their bad daily habits. In this paper, we report a young patient who had got severe cervical spinal cord compression and then analyze the causes of her disease. We hope to stimulate people's attention and reflection to the effect of good daily habits on the prevention of cervical spondylosis.

### Case Presentation

The patient is a 25-year-old sedentary worker. She had suffered from neck pain for only 10 days and therefore came to the rehabilitation medicine department of our hospital to ask for some physical therapies such as cervical traction or cervical massage. Physical examination: tenderness at C5-T1 interspinous process (+), tenderness at cervical paravertebral areas (—), Spurling sign (—), Revolve-cervix test (—), bilateral Hoffmann sign (—), bilateral Rossolimo sign (±), bilateral knee tendon reflexactive. So she was examined by MRI which showed that her cervical physiological radian disappeared and the cervical spine is against the bow, and C3-4 and C4-5 disc herniated. What is more, C4-5 intervertebral disc partly entered into spinal canal and thus dural sac and spinal cord were seriously squeezed. Besides, severe spinal cord deformation was also found, and spinal cord edema might take place in the segment (Figure 1 and 2). So the patient was informed that her neck pain was not suitable for conservative therapies and suggested to go to orthopedic department for operation.

### Discussion

Cervical spondylosis is on the basis of cervical intervertebral disc degeneration, cervical vertebra environment being at a high load for a long time, so that all kinds of soft or osseous causes pressure into spinal canal, which cause compression of spinal cord, nerves or blood vessels, and come into being clinical symptoms [1-3]. This patient is a sedentary worker with a history of chronic injury of the cervical intervertebral disc. What's more, She likes to lie down on the bed playing mobile phone at home. The onset time of the patient is just 10 days, and her main symptom is neck pain. But she has no limb dysfunction and her walking activities are not affected. However, the results reflected from the imaging examination are terrible: the cervical vertebra was against the bow, C4-5 disc herniation was so serious that the fibrous rings had ruptured, nucleus pulposus partly entered into spinal canal and spinal cord were seriously squeezed. Besides, severe spinal cord deformation was also found, and spinal cord edema began to take place in the segment. All of these indicated that spinal cord was seriously damaged.

Why so severe cervical spinal cord damage happened in a person in her 20s but she didn't realize it? Our society is in development. The ever-changing high-tech changed the way of our work and life. People in ancient times conveyed information through the post, and later by mail, then the way changed to telegraph and telephone. Today, people usually connect to each other with network. Nowadays, computers and mobile phones have become the indispensable source of our spiritual sustenance, and their importance is not inferior to the three meals we have every day. People usually bend their heads to face with computers while working. During a break or while walking, people often look down at mobile phones playing We Chat or microblog, or at home, fiddle with their phones lying on the sofa or bed with their bodies twisted. As time passes, normal cervical physiological radian gradually disappear and the cervical vertebrae become against the bow. Cervical intervertebral disc suffer from abnormal buckling compression, then fibrous rings and nucleus

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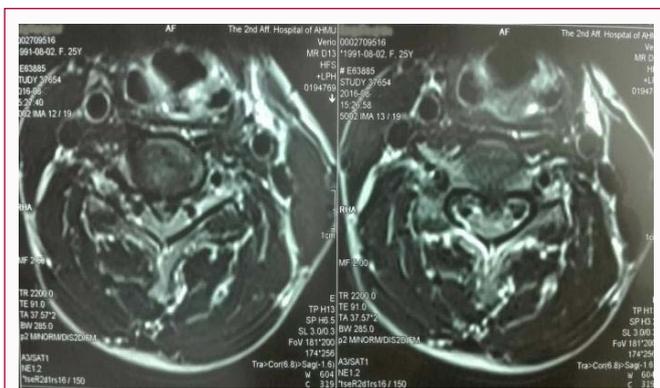
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**Figure 1:** Sagittal view MRI of the cervical spine which showed that the cervical physiological radian disappeared and the cervical spine was against the bow, C3-4 and C4-5 disc herniated, and spinal cord is seriously squeezed.



**Figure 2:** Transverse section view MRI of C4-5 cervical vertebra which showed that C4-5 intervertebral disc partly entered into spinal canal and thus dural sac and spinal cord are seriously squeezed so that severe spinal cord deformation was also found, and spinal cord edema might take place in the segment.

pulposus are damaged and degeneration is produced. Finally, fibrous rings rupture and spinal cord can be compressed by intervertebral disc [4,5]. As we can see in this case, fibrous rings have completely ruptured, nucleus pulposus partly enter into spinal canal and spinal cord are seriously squeezed.

The thinking triggered by this case is profound. For patients with cervical region unwell, massage can't be done literally, who need to go to normal hospital to check and treat. For doctors, patients must be given careful physical examination, supplemented by MRI when necessary, to understand the status of the cervical spine and the intervertebral disc, so that the correct diagnosis and treatment could be obtained.

We need mobile phones and computers in our daily life and work, but we can't have dependence on mobile phones and computers. Mobile phones and computers are only tools of our life and work, so we should be its owner, not its slave. We should arrange our work, study and rest reasonably. In our daily work, attention should be paid to the correct posture, and good living habits should be developed.

As the old saying goes: "sitting likes a clock, standing likes a pine". First, when we are seated, we should maintain a natural orthopnea position, straight chest and waist, then our cervical vertebra can maintain a physiological radian of convex forward, avoiding or reducing the damage to the cervical intervertebral disc. Second, when we are reading, writing or doing the desk work, the height of the seat and desktop should be appropriate with ourselves. What's more, we should see the computer screen at eye level, our shoulders being relaxed, our cervical vertebra not being excessive proneness or hypsokinesia and we shouldn't maintain a fixed pose for a long time, especially look at the screen of our mobile phones or computers with our heads lowered for over 1 hour. We need stand up to walk around, relax our neck and shoulder for the sake of reducing neck fatigue caused by sitting for a long time. Again, we should look ahead at eye level while walking. Fiddling with our phones while walking is not only dangerous for us but also harmful to our cervical vertebra and eyes. In addition, we shouldn't do any reading while staying in bed, and we should know that there's not resting easy when we lay our heads on the high pillows which is harmful. If you are used to keeping aside-lying position, you should make your pillow and shoulder be at the same height. Furthermore, you shouldn't make your head and neck be exposed to cold air blast when sleeping in the hot summer.

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