

Advances in surgical treatment of neck pain



Poor posture, degeneration of the disc in the neck and sometimes muscle injuries are the main causes behind neck pain, an ailment experienced by two-thirds of the population today, regardless of age.

Dr HT Chow, Specialist in Orthopaedics and Traumatology

Neck pain can mostly be relieved by conservative treatments, like bed rest, physiotherapy, medication or facet joint injection. However, if the pain is not responsive to these treatments, the latest type of orthopaedic surgery can help to eradicate the problem to improve patients' quality of life in the long term.

According to Dr HT Chow, Specialist in Orthopaedics and Traumatology, neck pain may be related to muscle pain or joint pain. Muscle pain may be caused by muscle fatigue or overstretching, as seen, for example, in people using the iPad and iPhone for long periods of time.

Joint pain in the neck may be related to the damage of the joint structures, usually resulting in more chronic and persistent symptoms. Commonest cause could be degeneration of the disc or facet joint of the neck. Occasionally, it could be due to trauma, infection or even tumour.

The spine is a structure of bones alternating with soft cushioning discs between them for shock absorption and to allow motion. A herniated disc (or slipped disc), caused by disc degeneration or injury, may pinch or compress a nerve in the cervical area and cause pain.

"Symptoms of chronic neck pain can range from a stiff or inflexible neck, to numbness in the neck, arms or shoulders. It may even disrupt sleep, affect walking or fine movements in the hands. In general, the symptoms start with pain, then progress to numbness and finally escalate

to the loss of mobility," explained Dr Chow.

Patients are diagnosed by physical examination and an MRI scan. Conservative treatments such as physiotherapy and medication are usually recommended as the first line of treatment. However if the pain is not relieved adequately within six weeks and daily activities become increasingly limiting, surgery will be an option to eradicate the problem.

Anterior Cervical Discectomy with Fusion

One of the most popular surgical procedures in this field is Anterior Cervical Discectomy with Fusion (ACDF). This fusion surgery entails the replacement of the collapsed disc by a synthetic implant to help re-establish the normal height of the disc space, while helping to maintain neck stability and alignment.

"Now in its third generation, the advanced implant used in ACDF is made with polymer. The implant is filled with a synthetic material with a fusion rate of almost 100%, meaning it will be eventually assimilated to our body," said Dr Chow.

New technique reduces post-operative pain

In the past, such surgery would entail taking a bone from the patient's hip and placing it in the cervical area. This might cause pain in the hip for a prolonged period and possibly other side effects that may take a long time to heal. The improved design of the latest implant, on the other hand, has the same fusion rate, but relieves the post-operative hip pain. "Patients can walk the next day and be out of the hospital the following day. They will be fully recovered in two to three months, and can even get back to playing contact sports in a year," he said. The latest advent in technique, materials and equipment has made this fusion a highly reliable and low-risk one, contrary to popular belief that neck surgery often involves high risks.



In ACDF, a synthetic implant replaces the collapsed cervical disc to help re-establish stability and alignment.



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Healing and Prevention

"Neck pain happens to people of all ages, peaking in the late 30s to early 40s age group mostly due to having a desk job and working in front of the computer all the time," explained Fanny Leung, Physiotherapy Manager, Matilda International Hospital.

Physiotherapy for neck pain consists of two parts: manual therapy to relax the muscle and mobilize stiff joints; and Pilates and stretching exercises to correct the posture and improve muscle imbalance. "The physiotherapist will devise a targeted exercise plan for the patients to re-educate their muscle use," she said.

Physiotherapy for post-surgery rehabilitation is essential to obtain a good recovery. Normally four to six months of physiotherapy is needed to improve the condition, as it takes time for building muscle strength and endurance. Muscle training is vital in preventing recurrent neck pain. Pilates is a good form of training as the exercise could be designed for different positions, in order to meet the needs of the client.

"As soon as stiffness in the neck is felt one should seek treatment to prevent further deterioration. In addition, everyone should take care to attain a correct work ergonomic, and after keeping the same posture for a maximum of two hours, one must remember to rest and stretch," Ms Leung concluded.



A targeted exercise plan that includes pilates will be recommended by the physiotherapist to help patients to re-gain a correct posture and muscle use.