

# SOUTHWESTERN NEWS

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## ADVANCES IN NEUROSURGICAL TECHNIQUES HELP NECK PAIN PATIENTS

DALLAS — May 29, 1997 — Improved surgical techniques and better biomedical implants are helping neurosurgeons at UT Southwestern Medical Center at Dallas more effectively counteract nerve damage in the neck that can lead to severe disability.

Patients suffering from the compression of spinal cord nerves in the cranial-cervical junction — the point at which a person's head meets the neck — often experience excruciating pain and difficulty moving the neck, as well as loss of sensation and movement in other parts of the body. Their condition is frequently misdiagnosed and has traditionally been considered hard to treat because of the location, said Dr. Howard Morgan, associate professor of neurological surgery at UT Southwestern.

A new generation of biomedical implants is enabling surgeons to treat these complex pathologies more precisely and with greater certainty of long-lasting solutions. Better imaging techniques also help physicians identify the source of a patient's problem more exactly and operate with increased precision.

"We feel that we can now perform surgery that can greatly improve the quality of life for most of these patients," said Morgan, holder of the Trammell Crow Professorship in Neurosurgery.

To alleviate the pressure being exerted on the nerve tissue at the crucial junction, surgeons remove the bone or soft tissue that is pressing against the nerves and then realign

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the vertebrae. Surgeons also are able to use bone grafting and titanium implants, custom-fitted to stabilize the cranial-cervical junction. This technique prevents movement during the healing process, allowing the bone graft to fuse the head to the neck.

Compression of spinal cord nerves often results from rheumatoid arthritis or traumatic injury to the head, neck or back. In some cases, the condition arises from congenital abnormalities that become noticeable only after reaching adulthood. Rheumatoid arthritis tends to cause many of the body's joints to deteriorate and frequently brings about instability between the first and second cervical vertebrae.

Morgan said it is important for people who experience symptoms, especially those who have rheumatoid arthritis, to see a specialist who can evaluate them for nerve compression. If left untreated, nerve compression at the cranial-cervical junction can interfere with the ability to perform routine daily tasks because of the disabling pain. The compression of nerve communication lines can cause a numbing sensation in the arms and legs, a loss of strength and, ultimately, a loss of mobility. Bowel and bladder problems, along with breathing and swallowing difficulties, also can develop, Morgan said.

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