Herniated disc

**Definition:** Back pain is one of the most common health problems so that 90% of people experience back pain during their lifetime. This disorder is the second most common disability in all age groups. Its prevalence is the same in men and women and is associated with obesity and occupation. There are two main causes, one is related to disorders in the structures of the lumbar region such as muscles, vertebrae and intervertebral discs, and the other is related to tissues adjacent to the lumbar region such as kidney stones, pancreatitis and abdominal aneurysms that spread to the lumbar region. Back pain may be inflammatory or mechanical. Inflammatory back pain, such as rheumatism, decreases with activity, but the mechanical type (such as an intervertebral disc herniation) is exacerbated by activity and relieved by rest. The intervertebral disc is a cartilaginous plate located between the vertebrae that allows mobility for the spine.

This plate consists of two sections:

- Gelatinous Nucleus (Nucleus pulposus)
- The fibrous ring around Annulus fibrosus

Usually following trauma and degenerative changes in the fibrous ring, first the gelatinous nucleus protrudes and puts pressure on the fibrous ring (bulging). At this stage, the pain is limited to the lumbar region. Gradually, the fibrous ring ruptures and the gelatinous material protrudes and a disc herniation develops. At this stage, the back pain is relieved, but due to the pressure of the gelatinous substance protruding into the nerve root; The pain spreads to the nerve pathway. L4-L3 hernia causes groin pain and decreased knee reflex, and advanced L5 hernia leads to irreversible paralysis.

Trauma and bent positions put a lot of pressure on the vertebrae and cause a disc herniation. Disc herniation is more common in active areas of the spine (such as the lumbar region (L5-L4) and neck (C7-C6).

**Diagnostic findings:**

Clinical examination with CT scan and MRI is a good diagnostic tool for intervertebral disc herniation.

**Treatment:**

There are two treatments for disc herniation: Conservative treatment and surgery

Conservative treatment lasts 4 weeks and includes:

- Complete rest for a short time (less than 4 days) on a firm mattress with an open arch
- Prevent flexion and rotation in the spine such as lifting objects.
- Use of non-steroidal anti-inflammatory drugs
- Muscle relaxants and warm compresses
- After physiotherapy pain control and patient training, surgery if conservative treatment is not effective.

A variety of surgical techniques
The goal of surgical treatment is to reduce the pressure on the nerve root in order to relieve pain and compensate for neurological defects.

- **Discectomy**: Removing the protruding part of the disc
- **Laminectomy**: Incision in the posterior arch of the vertebrae and releasing the nerve root
- **Fusion Discectomy**: Removing a protruding disc and using a bone graft to connect two vertebrae
- **Furaminotomy**: Removing the intervertebral hole to increase space for spinal nerve outflow, which reduces pain, pressure, and edema.

**Complications of disc surgery:**

- Recurrence of hernia
- Hematoma
- Bleeding
- Infection
- CSF exit from the wound site

**Nursing care:**

- Postoperative position to reduce pain 12-24 hours lying flat on your back
- Pain control using prescription of painkillers, which are generally opioid
- It is necessary to control the sensation and movement, temperature and color of the toes alternately after the operation
- Slight bending of the knee, which relaxes the back muscles and reduces pain
- Explaining the limitations and range of motion to the patient
- Moving on the bed like cutting the tree without bending the back
- Examining the operation site for severe bleeding or pain and swelling that indicates a hematoma
- Controlling dressing for bleeding or leakage of CSF and drainage and secretions recording
- Encouraging the patient to cough effectively, take deep breaths, and use stimulus spirometry and respiratory physiotherapy to prevent atelectasis
- Examining the dressing site for signs of infection (redness, swelling, tenderness and heat, discharge of purulent secretions and fever) and observing sterile tips in changing the dressing
- Walking the patient with a belt and the help of a physiotherapist

If you have any questions or ambiguities, call the following number:

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