

**Outcome of treatment of backache in AL-Hussein teaching hospital in AL-Muthanna**

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**College of Medicine, Al-Muthanna University <sup>2,3</sup> Abstract:**

This study was conducted on 50 patients from 10 October , 2022 to 1 March ,2023 at Al-Hussein teaching hospital , Al-Muthanna, Iraq.

72 % male and 28 % female . All patients sent for complete investigation such as CBC ,ESR, CRP , and rheumatologic factor and also sent for imaging such as plain x-ray of spine , CT scan and MRI . We study the risk factor such as age, sex, occupation , smoking associated disease (such as arthritis , cancer ),obesity , psychological condition .we find that.80% Of patient treated conservative and.20% treated with surgery and we find that conservative treatment is better than operative

**Objectives:** Assess Outcome of the treatment back pain.

**Key words:** treatment, hospital, psychological

### **Introduction Anatomy**

The back consists of skin and fascia overlying the spine, scapulae, muscle groups, nerves, vessels, and the lumbosacral vertebrae. The primary movements of the back are flexion/extension, lateral bending, and rotation of the trunk. Some of the back muscles attach to the lateral and posterior processes of the vertebrae and help the spine maintain an upright posture, while others are involved in upper extremity movement.[1]

The back muscles are divided into three layers deep, intermediate and superficial. In some scientific records, these muscles can also be grouped as extrinsic and intrinsic back muscles.

Blood supply to the skin and muscles in the back is primarily from dorsal branches of the posterior intercostal arteries.[2]

Nervous supply to the back primarily arises from dorsal branches of spinal nerves, also known as posterior rami. The sensory innervation to the back organizes in a dermatomal pattern, which corresponds to a specific spinal nerve at different spinal nerves.[3]

### **Epidemiology**

Back pain is widespread in the adult population. Some studies have shown that up to 23% of the world's adults suffer from chronic low back pain. This population has also shown a one-year recurrence rate of 24% to 80% [4][5] Some estimates of lifetime prevalence are as high as 84% in the adult population [3][6][7]

## Etiology

Back pain is a broad topic with many potential etiologies that are broken mainly into five primary categories [8]

- **Mechanical:** Most commonly this is due to injury to the spine, intervertebral discs, or soft tissues. Fractures such as spondylolisthesis can be both an acute or chronic process. Lumbago often is labeled as acute back pain or a strain to either the quadratus lumborum muscle or the paraspinal muscles. Disc herniation is a common type of traumatic back pain. Pregnancy is also a mechanical cause of back pain.
- **Degenerative:** Osteoarthritis of the spine includes facet joint osteoarthritis, sacroiliac joint osteoarthritis, spinal stenosis, and degenerative disc disease. Furthermore, osteoporotic compressive fractures are also a degenerative process.
- **Inflammatory:** This is caused primarily due to inflammatory (seronegative) spondyloarthropathies such as ankylosing spondylitis. Sacroiliitis is most commonly seen. The pathophysiology of back pain depends on the etiology. Most often, it may be a part of an acute inflammatory process.
- **Oncologic:** This is caused by lytic lesions to the spine, cancers of the marrow, or compressive nerve phenomena from adjacent spaceoccupying lesions. Often presenting as a pathological fracture.
- **Infectious:** Infections of the spine, discs, epidural abscesses, or muscular/soft tissue abscesses

## Pathophysiology 1-spondylolisthesis

Any process that can weaken the supports keeping vertebral bodies aligned can allow spondylolisthesis to occur. As one vertebra moves relative to the adjacent vertebrae, local pain can occur from mechanical motion or radicular or myelopathic pain can occur due to compression of the exiting nerve roots or spinal cord, respectively[10][11][12]

**2-Disc prolapse** :The pathophysiology of herniated discs is believed to be a combination of the mechanical compression of the nerve by the bulging nucleus pulposus and the local increase in inflammatory chemokines.[13][1][15].

**3-Spinal stenosis** :is a disease process that results from the narrowing of the vertebral spinal canal and the lateral recesses. This often leads to the compression of the structures located within the spinal canal, including the spinal cord, nearby nerve tissue, and cerebrospinal fluid. There are multiple factors that can lead to the narrowing. This includes bulging or protrusion of the intervertebral disc, herniation of the nucleus pulposus posteriorly, epidural fat deposition, hypertrophy of posterior longitudinal ligament, or the ligamentum flavum, and hypertrophy of the facet joints[16][17][18].Spinal cord injury can result in cord lead to major complications such as myelopathic syndrome or cauda equina syndrome. [19][20].

**Aim of the study**

The aim of study was to assess the outcomes of treatment of backache and evaluation of risk factor of back pain in Al-Muthanna city.

**Patients and method**

This study was conducted among individuals who were suffering from backache in Al Muthana City ,from 10 October , 2022 to 1 March ,2023 at Al-Hussein teaching hospital , Al-Muthanna, Iraq.

All patients sent for complete investigation such as CBC ,ESR, CRP , and rheumatologic factor and also sent for imaging such as plain x-ray of spine , CT scan and MRI . We study the risk factor such as age, sex, occupation , smoking associated disease (such as arthritis , cancer ),obesity , psychological condition .

A total of 50 patients with backache were included in this study .80% of patient were treated with conservative treatment that included bed rest , skin traction and drug such as NSAID, Opioid, analgesia. 30% of patient treated by surgery including laminectomy , discectomy and fixation .

We follow up all patients every 2 month for 6 month to evaluate the outcome of treatment .we compared the result of conservative and surgical treatment of backache.

**Result**

Table (1): patient characteristics

|        |        |           |
|--------|--------|-----------|
| GANDER | male   | 36<br>72% |
|        | female | 14<br>28% |

|              |           |
|--------------|-----------|
| TREAT        | %         |
| conservative | 40<br>80% |
| surgery      | 10<br>20% |

|              |               |           |
|--------------|---------------|-----------|
| conservative | drug          | 20<br>50% |
|              | Skin traction | 6<br>15%  |
|              | Bed rest      | 14<br>35% |

|         |             |          |
|---------|-------------|----------|
| surgery | laminectomy | 2<br>20% |
|         | Discectomy  | 4<br>40% |
|         | fixation    | 4<br>40% |

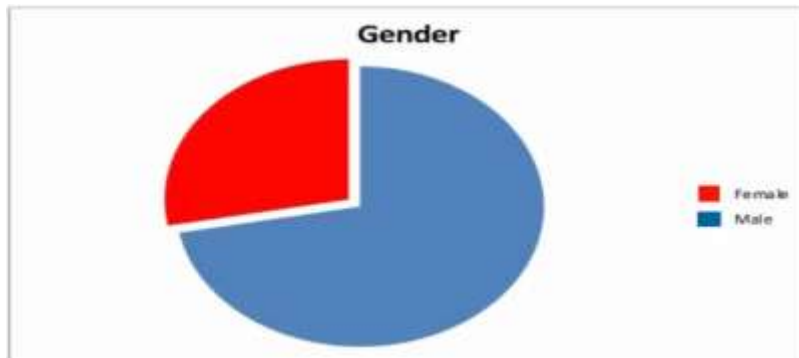
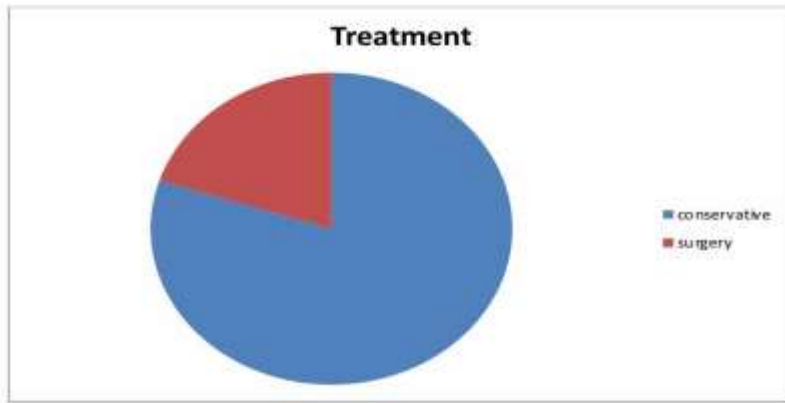
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|----------|----------|----------|----------|----------|---------|
| Out come | 10-20    | 20-30    | 30-40    | 40-50    | 50-60   |
| cure     | 4<br>8%  | 3<br>6%  | 4<br>8%  | 5<br>10% | 4<br>8% |
| no       | 5<br>10% | 7<br>14% | 6<br>12% | 9<br>18% | 3<br>6% |

| smoking | 10-20 | 20-30 | 30-40 | 40-50 | 50-60 |
|---------|-------|-------|-------|-------|-------|
|         | 2     | 14    | 15    | 5     | 14    |
|         | 4%    | 28%   | 30%   | 10%   | 28%   |

| occupations | driver     | 13  |
|-------------|------------|-----|
|             |            | 26% |
|             | Free wrker | 8   |
|             |            | 16% |
|             | solider    | 11  |
|             |            | 22% |
|             | House wife | 13  |
|             |            | 26% |
|             | other      | 5   |
|             |            | 10% |

|           |     |
|-----------|-----|
| BMI < 20  | 3   |
|           | 6%  |
| BMI 20-25 | 7   |
|           | 14% |
| BMI 25-30 | 17  |
|           | 34% |
| BMI > 30  | 23  |
|           | 46% |

Figure (5): outcome of treatment of backache



Figure(2): percentage of each conservative treatment

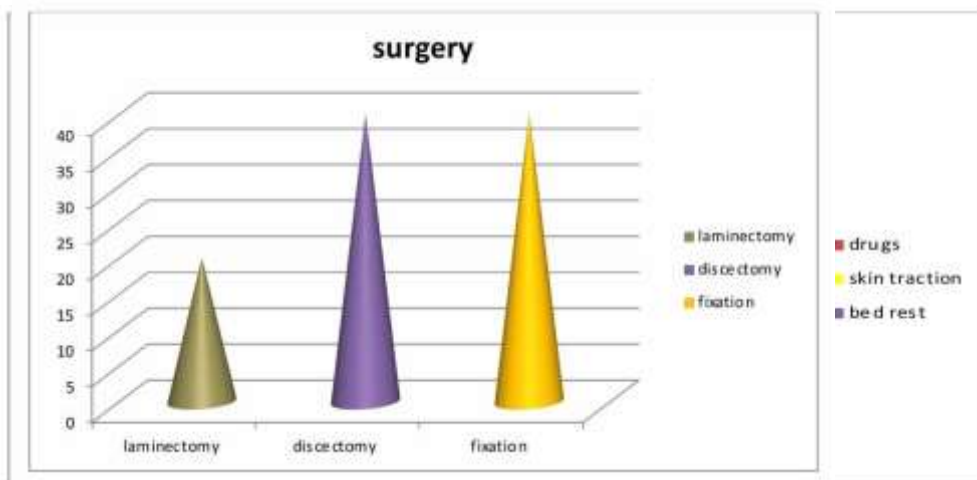
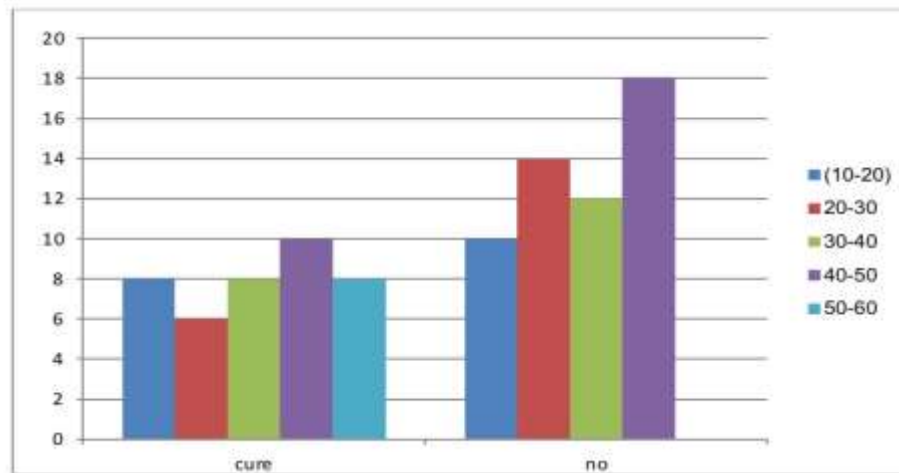


Figure (3): percentage of surgical treatment



## Discussion

Back pain is one of the most common causes for patients to seek emergency care. It has a broad range of potential causes

### Risk factors

Anyone can develop back pain, even children and teens. These factors can increase the risk of developing back pain:

- Age. Back pain is more common with age, starting around age 30 or 40. Elderly are more likely to suffer from pain related to degeneration of the joints in the spine. Two of the most common causes of lower back pain in older adults include **osteoarthritis and spinal stenosis**
- Lack of exercise. Weak, unused muscles in the back and abdomen might lead to back pain.
- Excess weight. Excess body weight puts extra stress on the back.
- Diseases. Some types of arthritis and cancer can contribute to back pain.
- Improper lifting. Using the back instead of the legs can lead to back pain.
- Psychological conditions. People prone to depression and anxiety appear to have a greater risk of back pain. Stress can cause muscle tension, which can contribute to back pain.
- Smoking. Smokers have increased rates of back pain. This may occur because smoking causes coughing, which can lead to herniated disks. Smoking also can decrease blood flow to the spine and increase the risk of osteoporosis[9].

Smoking damages arteries, and it's thought that the damaged arteries in the discs and joints in back may lead to pain and injury. 80% of patient treated with conservative treatment and 20% treated with surgery that have many complication including blood clots in the legs. chest infection. damage to the dura that occure with laminectomy and Nerve injury, dysesthesia, complex regional pain syndrome, dural tears, bowel injury, psoas hematoma, epidural hematoma that occur with discectomy so we find that conservative treatment is better than operative treatment .

## Conclusion

The outcome of treatment of backache can be affected with risk factor such as age of patient , smoking , obesity , lack of exercise . And we find that conservative treatment is better than operative treatment .

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