# CRONIC LOW BACKACHE in the MIDDLE-AGED WOMAN

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Back pain may be described as a universal symptom. Almost everyone suffers from backache at one time or another in their lives, and some have it more or less continuously, but only a proportion of those who suffer from it, complain of it.

Women are more prone to the condition than men because of hormonal influences, changes of posture during pregnancy and because gynaecological disturbances may cause backache.

The complaint is often suffered in silence. Many people believe it is a normal sequel to childbirth or a natural accompaniment of the menopause. It is a subject which is often dismissed lightly, but much discomfort and disability can be ameliorated.

The frequency with which long standing symptoms in the back and a neurotic personality coincide is notorious. Backache is a psychosomatic disturbance, and inevitably, whatever the cause, it is very likely that sooner or later there will be psychological implications.

The treatment of backache demands the time and patience of the practitioner. Backache is seen in equal numbers by the gynaecologist and the orthopaedic surgeon. There is in fact an organic cause to nearly every complaint in the back.

The assessment of the severity of pain, the cause of it and the treatment best fitted to the individual patient remains one of the more difficult problems in clinical medicine. It is by no means possible to arrive at a precise diagnosis, but the attempt must be made, for it is unusual to identify the specific structure causing pain in the back, even when X-ray changes are present.

Not many years ago, the concept of the slipped disc came into vogue. Doctors jumped at this notion as a gift from heaven and the diagnosis was exploited so that slipped disc became the diagnosis for almost every backache. The subject is complex. Almost any structure in the spine can in fact cause pain. Furthermore, many abdominal or pelvic organs can cause pain referred to the back, that is, seeming as if it were coming from the back.

Backache is a symptom and not a diagnosis. It presents frequently as an entity (as does headache).

To simplify the matter therefore, it is useful to classify backache into a number of clinical syndromes, since every

case can be so correlated with one of these syndromes, making both treatment and prognosis clearer. In practice also, it is far easier to recognise the syndrome to which a particular case belongs than to attempt to diagnose a complicated and usually controversial pathology.

As mentioned above, the elucidation of the nature of the backache requires time. The history must be detailed enough to give a complete mental picture of the onset of backache and its course. General symptoms and complaints other than the backache must be asked for as they may be highly relevant to the diagnosis. Next of importance is a detailed physical examination. This involves a general examination of the patient as well as a local examination of the spine in motion, standing, supine and prone, and a detailed examination of the central and peripheral nervous systems. A gynaecological examination should be made if the symptoms point to it. An X-ray examination is an essential accompaniment, and further modern and sophisticated investigations can be performed if indicated.

## THE SYNDROMES OF BACKACHE IN THE OLDER WOMAN

### A. GYNAECOLOGICAL BACKACHE

Backache that results from a gynaecological lesion is diffuse in nature. The pain results from involvement or extension of pathological processes into the utero sacral ligaments and hence is always sacral or lumbo sacral in situation. The pain may be uni- or bilateral. Point tenderness is never a feature. The possible causes of gynaecological backache are as follows:

**1. Menopausal backache and osteoporosis**

Recent research has shown a relationship to exist between ovarian endocrine function and the density of bone. Osteoporosis is a metabolic disease of bone characterised by a disturbance between bone formation and resorption. The main disturbance is an increased resorption of bone which is related to production of hormones. The osteoporosis commences or accelerates in women soon after the natural or induced menopause and it does seem that osteoporosis is related to endogenous oestrogen deficiency. Recent work has tended to show that osteoporosis is more likely to develop when both calcium and sex hormones are deficient.

Whatever the pathogenesis of the disorder, the effect is a rarification of the bone. Nevertheless, while reduced in quantity, the bone is essentially of normal chemical composition.

Osteoporosis is probably the commonest cause of chronic backache in the elderly patient. Although all parts of the skeleton are affected, the spine and pelvis are more extensively involved than other parts. Radiologically there is rarification and collapsed vertebrae are often seen.

The pain is characteristically worse when the patient is up and about or tired and is accompanied by rounding of the back and loss of stature.

At present it appears that removal of normal ovaries from a female of reproductive age will certainly result in osteoporosis.

Administration of exogenous natural oestrogens may prevent the development or extension of this process. Unfortunately, there is no evidence as yet that such female hormones can cure or improve osteoporosis once it has developed.

**2. Chronic Pelvic Sepsis** as a cause of low backache results from extension of infection into the uterosacral ligaments.

**3. Uterine prolapse:** by dragging on the attached ligaments may cause pain in the lower back. Classically the pain is immediately relieved by lying down.

**4. Tumours.** Neoplastic lesions directly infiltrating the uterosacral ligaments may cause unilateral or bilateral low backache. The commonest tumour in this respect is advanced cancer of the cervix. Endometriosis may also produce backache in this manner. Large abdominal tumours may cause backache purely as a result of their weight and bulk and the subsequent strain on the back caused by a change in posture.

**5. Gynaecological operations** may cause pain in the back as a result of incorrect positioning or handling of the anaesthetised patient.

### TREATMENT

The treatment of backache of gynaecological origin is that of the cause. This necessitates meticulous diagnosis.

**Prevention:** A discussion such as this would be incomplete without some comment on prophylaxis. The following factors are important if backache is to be minimised in the female.

**1. Antenatal and postnatal care**

Incorrect management of the pregnant female may be a cause of ligamentous strain and subsequent backache in later life. This management includes advice with regard to correct posture, clothing and footwear, ante and postnatal exercises and avoidance during labour of situations imposing excessive strain on the back. Postnatal exercises imply long term exercises. The patient should be advised and encouraged to perform a few basic abdominal and back muscle exercises daily for years. Housework, irrespective of how fatiguing this may be, does not act as a substitution for a planned exercise programme.

**2. Retention of ovaries at gynaecological surgery**

Premature removal of the female ovary has been shown to result in a negative calcium balance and the subsequent development of osteoporosis. It is therefore incorrect for the gynaecologist to remove ovaries of normal appearance at the time of hysterectomy on women of reproductive age.

### B. ORTHOPAEDIC BACKACHE

The causes of orthopaedic backache are extremely numerous. For simplicity sake, it is convenient to arrange them into Mechanical and Pathological groups.

In the first type, the bones and tissues themselves are normal, but there is some displacement of the normal relationships. These include derangements of the intervertebral disc, movement of vertebrae one upon the other, injuries of the back, and chronic postural strains.

In the second type, there is some pathological process involving the bones themselves, be it biochemical, infective or neoplastic.

**I. Mechanical causes of backache**

**1. Intervertebral disc displacements**

The intervertebral discs are situated between adjacent vertebral bodies. The disc itself is a jelly like substance

contained in a fibrous ring and under certain circumstances and especially in the lower lumbar spine, it may herniate anteriorly and press on emerging nerve roots, and stretch ligaments, and low back pain and sciatica result.

The patient is generally well. There may have been previous episodes of low back pain and sciatica. The classical attack starts acutely while the patient is bending forward and trying to lift a heavy weight, and the pain is usually felt in the back and down one leg; this pain is worse on coughing and straining. There are typical local signs of tenderness, muscle spasm, and perhaps scoliosis. Neurological signs from pressure on affected nerve roots may be found. X-rays may show no abnormality, a diminished disc space, or signs of osteoarthritis.

Treatment consists of strict and complete recumbent bed rest with traction to both legs for at least 10 days to three weeks. Afterwards, back strengthening exercises and postural training are important. A plaster jacket or a corset may be needed for a time when the patient gets up. Only in resistant cases is further special investigation necessary and laminectomy and surgical removal of the disc necessary.

2. **Acute traumatic injuries** are usually followed immediately by severe pain. Spinal injuries may be stable or unstable. The fracture is treated on its merits. If there is no X-ray abnormality, the soft tissue injury is generally not serious and with adequate rest, full recovery can be expected. Almost everyone at one time or another hurts or strains his back, either from a heavy fall or a blow, but only very rarely does the episode cause pain and disability.

3. **Chronic postural strain.** This is characterised by long-standing aching pain in the back perhaps radiating to buttocks and thighs, aggravated by stooping, and punctuated by remissions and exacerbations. The middle aged woman frequently complains of low backache, especially after a day's work, and worse on being tired. It does not usually keep her from her activities. The key to diagnosis is therefore the history, for both physical examination and X-rays are negative.

4. **Spondylolisthesis:** Slipping of one vertebra on another is known as spondylolisthesis. It is a rather rare abnormality. It may cause episodes of low backache and the diagnosis is established with the help of X-rays. Immobilisation in plaster or a corset may provide relief but if displacement is marked, surgical fusion of two vertebrae is usually necessary.

### II. The pathological syndromes of backache

1. **Osteoporosis** has already been mentioned as being one of the most prominent causes of backache in the elderly female. The effects of osteoporosis occupy a considerable portion of the practice of an orthopaedic surgeon.

2. **Osteoarthritis.** This is a condition which involves the degeneration of joints as a whole, especially articular cartilage, associated with advancing age. The involved joints become stiff and painful. The spine is often the site for osteoarthritic changes, and many cases are diagnosed by the incidental finding of osteoarthritis of the spine on an X-ray when looking for some other pathology.

### 3. Acute and chronic infections

These should always be excluded in any case of low backache, as this may be the only symptom indicating the onset of a disease process.

### 4. Primary and secondary neoplasms

Severe backache in the elderly always raises the possibility of a neoplastic deposit in the spine. The pain is usually continuous at rest and often worse at night. X-rays may indicate such a lesion, and common sites for a primary should be sought.

### 5. Rheumatic backache

There is a group of conditions which includes rheumatism, fibrositis, lumbago, sciatica and arthritis. Recent investigations have tended to deny the existence of such conditions, but nevertheless there does appear to be a general condition of rheumatism to which certain types of people appear prone.

The intricate complex of joints, ligaments and muscles that constitute the lumbar and sacral spine provide infinite and varying possibilities for the source of pain and the site of a disease process. Sometimes tender nodules may be felt in the soft tissues, the exact nature of which are poorly understood. The term fibrositis may well be applied to this condition. The nodules often act as trigger points from which backache may originate.

## TREATMENT

With such a bewildering array of possible causes for backache, it is not surprising that successful treatment can be so elusive. In general, treatment follows one of two lines:

### 1. Conservative treatment

Positive treatment often cannot be prescribed even for the more clearly defined conditions. In many cases of long standing low backache which are not discogenic, treatment may take the form of:

(*a*) **Physiotherapy**—exercises to strengthen the back and teach posture. Mobilisation exercises, massage, short wave diathermy and ultrasound and intermittent traction may all prove helpful in the appropriate case.

(*b*) **Local injections** of anaesthetic agents and hydrocortisone into tender areas may be extremely useful.

(*c*) **Braces or corsets,** to relieve strain on ligaments; these should always be supplemented with exercises.

In some cases, physical habitus and posture may suggest that defective posture is the cause of backache, and postural exercises and training are indicated.

### 2. Surgery

The place of surgery in low backache should be reserved for the relatively few clear cut indications. Operations for removal of discs and release of pressure on nerve roots is already a well established procedure. This is usually undertaken only after controlled and energetic conservative measures have been tried and have failed.

Fusion of the spine is seldom undertaken for low backache due to the lack of precise indications for surgery, and to the technical difficulties in securing a sound fusion. It is one of the fundamental principles of orthopaedic surgery to fuse a painful joint. Few patients with low backache have a structural abnormality that can be detected radiologically. Even when X-ray changes are present, it is usually impossible to say that the causes of such changes are the causes of low back pain. Degenerative changes per se are no indication

for surgery because conservative treatment will give satisfactory results in more than half the patients. Indications for fusion are therefore clinical rather than radiological as studies have shown the similarity of symptomatology no matter what the pathology. In a proportion of cases therefore where there is persistant long standing low back pain that fails to respond to conservative measures and when the degree of degeneration warrants it, fusion is indicated.

## CONCLUSIONS

The problem of low backache in the elderly female is thus seen to be a bewildering and difficult subject. An attempt has been made to explain the various causes of low backache and to simplify the problem by classifying the various possible causes into a group of clinical syndromes.

Each group is described separately and the methods of examination, diagnosis and treatment are discussed.

It is important to make a full assessment of the individual patient including her mental makeup, her environment, and the physical lesion.