

Orthopedic Diseases

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Spondylo-listhesis of the lumbar spine

This is a very common condition where a part of the vertebral body is broken, either because of a congenital defect or due to a stress fracture or a degenerative condition. The incidence in white skeletons, for example, is 4.2% in 2300 skeletons (Roche and Rowe 1951). This is yet another condition where surgery can be avoided if yoga is started early enough. But before we can proceed further we must understand the pathology of the condition.

Etiopathology

The forward displacement (towards the front side of the body) of one vertebra over the other is known as spondylo-listhesis. This is more common at the L5 level over the S1 junction (though a slip of L4 over L5 vertebra can also occur) as this is a critical junction of the spinal column. There may be no symptoms throughout life, only to be discovered during a routine examination, a master health check up. More commonly, a problem of backache occurs. The displacement and its progression is a gradual phenomenon. There are several stages in this (stages 1-3). The forward slip of the vertebra is due to tractional muscular forces. Hence yoga is a prime tool to help in this situation.

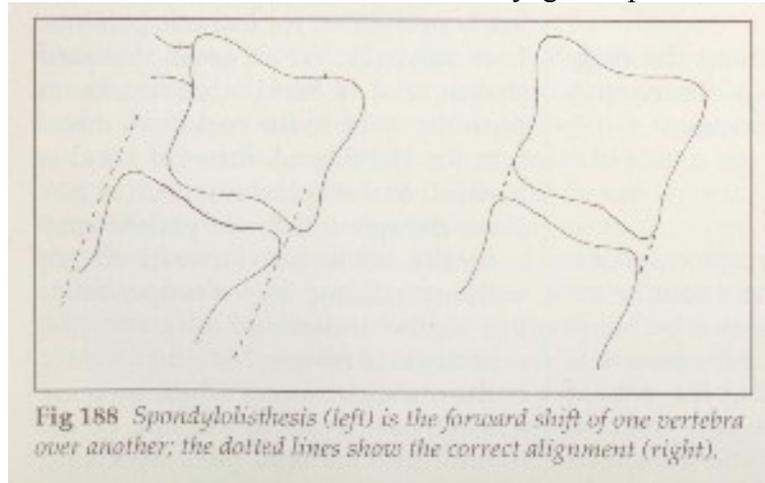


Figure 1- Illustrates the listhetic slip (left) and a normal alignment (right)

(Diagram reproduced with permission from A Matter of Health: Integration of Yoga and Western Medicine for prevention and cure).

Obesity and a pendulous abdomen are potent aggravating factors that tend to drag the spine in the forward direction. It is common to notice the effect of this in a pregnant woman who, because of the extra load, has a hyper-arched spine. A childhood fall on the back may be a forgotten cause. Gymnasts can suffer such injuries. Many occupational injuries can be responsible. In factories

where persons have to load heavy objects onto another area — such as lifting a lorry tire hub to a

higher level, which can be as frequent as loading 50 to 100 such hubs per day per person — stress fractures can occur.

Symptoms:

The most common symptom is low back pain. The symptoms can date from early life — from childhood, teenage or young adulthood. The patient can suffer from pressure on the lumbar nerve root and suffer sciatica or inability to walk for some distance: claudication pain. The terminal part of the spinal cord can be caught in the displaced angle and the patient can suffer an acute inability to move the legs. In severe cases the nerves innervating the bladder can be pressurized leading to difficulty in micturition. This is a situation which needs immediate surgery. It may be possible that more women than men suffer symptoms. The reason could be the softening effect on the ligaments of the spine by the hormonal changes of pregnancy.

Diagnosis:

The history of a fall may be a pointer to the diagnosis. Physical examination of the patient in the early stages may reveal a mobile spine due to the excess mobility at the L5 junction. Thus a patient may, in spite of the pathology, flex the spine and touch the hands to the floor which a healthy person may not be able to do. An excess of the lumbar arch producing an exaggerated hollow in the low back is a common finding. Tenderness on pressure in the affected area may occur. Pain and features of a low back pain problem is often present. In severe cases of a slip, a ridge or a groove on the patient's back due to the slipping of the spine forward is often palpable.

A good radiograph often helps in clinching the diagnosis. The break in continuity can be easily observed. A CT scan or an MRI provides a very clear picture.

Medical management:

As mentioned before, patients can be symptom less for many years. If the defect is discovered on a routine examination, the most common dilemma is whether it warrants treatment. Definitely, surgical management is not the consideration at this juncture; (unless it is a third degree slip) but the patient should be instructed to keep the back healthy with exercises. In a patient with acute pain, rest and analgesics will serve the purpose. After recovery, the back can be strengthened with exercises. The recovery time may vary from patient to patient. The younger the patient, the better is the overall prognosis. If recovery does not occur at all, (which is uncommon), surgery may be considered. Surgery is done by fusing the spine in the place to which it has slipped by nails and other methods. The pain does lessen but the quality of life after surgery is more important. The patient has to sacrifice good mobility for pain relief; whereas, if exercises are practiced, both pain relief and healthier mobility results.

After surgery, if the patient has no relief from pain, it could be difficult to rectify the situation. Efforts have to be made and rehabilitation can always be attempted and many do recover fully.

Yogic management:

The management is similar to lower back pain except that more care is needed while performing the poses.

Tips for a healthy back (includes the entire back)

1. Sit very erect always
2. Avoid prolonged sitting if your job involves being seated always
3. Stop smoking and avoid alcohol
4. Exercise daily – include both flexibility and strength training in this routine
5. Use a thin pillow of a soft material- avoid the so called special pillows meant for such ailments.

Can back pain be prevented?

It certainly can be, if one takes the following measures

1. Include a session of yoga in your daily routine
2. Avoid slouching and develop awareness of your body habits and posture
3. Keep your weight under control
4. Use firm non sagging mattresses.
5. Include proper lifting techniques.

Who is most likely to develop spinal pain?

1. Those who maintain a sit for several hours without movement- the duration of sitting is variable – all human beings have different thresholds for this.
2. Those who stand long hours without a break.
3. Extremely slender persons- as their spinal muscles are weak and lack postural-strength retaining capacity.
4. Obese persons-as their body is too immobile and awkward to be carried about.
5. Couch potatoes in sloppy postures.

How is spinal pain diagnosed?

1. Clinical examination
2. Radiological procedures- X-ray. MR and a CT scan. Not all are need for each patient.
3. Blood test to rule out infections and other pathologies.
4. Lifestyle of the patient is most important.