ORTHOSPORTS
QUESTION FOR PHYSIOTHERAPISTS

QUESTION |WE ARE SEEING AN INCREASING NUMBER OF PATIENTS COME THROUGH OUR REHAB SERVICE WITH ANTERIOR SPINAL FUSIONS. COULD YOU PLEASE EXPLAIN WHEN THE SURGEON WOULD CHOOSE TO PERFORM THIS SURGERY OVER THE STANDARD (POSTERIOR) APPROACH AND IF ANY SPECIAL PRECAUTIONS EXIST FOR THESE PATIENTS?

Dr Andreas Loefler answers this month's question:

ANSWER: | Spinal fusions can be achieved through various approaches, and none of these are new. The most common way to fuse the cervical spine is from the front. Curiously the tradition in neurosurgery is to operate from the right side, whilst most orthopaedic surgeons will do so from the left.
The anterior approach to the lumbar spine has been used for decades, although the instrumentation and the implants have changed over the years, and the approach has become smaller. The lumbar spine is exposed through a left sided retroperitoneal approach, reflecting the peritoneum and the intestines to the right and dissecting the aorta off the spine.

The lumbar discs can also be fused through a direct lateral approach and there has been some advertising of new devices, which can be inserted with minimally invasive techniques, but there is a trade off, as the risks and complications increase and as some of the implants do not have any long term follow-up.

The most common approach to the lumbar spine is posterior. The nerves lie posterior to the spinal column. Exposure and decompression of nerves, like in spinal stenosis, is best done from the back. The pedicles of the vertebra also lie posterior and are very strong. Pedicel screw instrumentation is a powerful method of achieving stability and correcting deformity.

A patient with one or two level disc pathology, say with mechanical back pain, but without any neurological symptoms, can be treated with an anterior lumbar Interbody fusion (ALIF). Ideally such a patient is slim and has not had major abdominal surgery in the past, as scar tissue will complicate the exposure. The anterior approach is also used for lumbar disc replacements. It is sometimes used for fractures and for tumours of the spine. On occasions an anterior approach is combined with a posterior approach, such as when excising an anterior tumour and then stabilizing the spine from behind.

Patients who had anterior surgery of the lumbar spine will have some of the problems of abdominal surgery. They may have an ileus and will need to stay fasted till their intestines start working. They will have abdominal pain with shallow breathing. They will also lose strength in their abdominal muscles. Some surgeons might use a brace for a number of weeks. Depending on the type of surgery and on the implants used, the surgeon will advise when to begin with a range of motion and strengthening program.

Once the acute postoperative pain has settled, patients start gentle flexion and extension exercises. I encourage them to walk, use a stationary bike and to swim after 3 to 4 weeks. There is a need to be cautious, as the aim of the surgery is to achieve a fusion. Vertebrae take 2-3 months to unite. Vigorous exercise and impact sports should be delayed until the x-rays show satisfactory union.

Dr Andreas Loefler