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This information is intended for media professionals and investors

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Backgrounder - Minimal Access Spinal Technologies

Background

Minimal Access Spinal Technologies

Overview

When spine problems develop due to injury, aging, wear and tear, or deformity, treatment options should focus on the actual source of the problem with the least amount of interruption to a patient's life. Medication, physical therapy, bracing or lifestyle changes may successfully treat problems caused by slipped discs, slipped vertebrae or curvature of the spine. For many people, though, surgery may be the best option to treat pain or deformity.

"Open Surgery"

The most beneficial aspect of traditional open surgery is the ability to see and access the spine easily. This type of surgery, however, involves long incisions, cutting and removal of muscle from the spine, and considerable post-surgical pain. Due to the large incisions and significant damage to the muscle, open surgery patients may experience hospital stays, recovery periods, scarring and pain that make this type of surgery daunting and exhaustive. Developing procedures that significantly reduce these effects through minimally invasive methods may allow patients to return to regular, active lives with less interruption and pain.

Minimal Access Spinal Technologies

Minimally invasive procedures made possible by Minimal Access Spinal Technologies (MAST) potentially allow surgeons to successfully treat back pain and deformity with the least amount of interruption while achieving the same surgical objectives as open surgeries. These technologies have been developed out of the advances made in the field of orthopedic minimal access surgeries over the past two decades. Video cameras, x-rays, detailed anatomy imaging, computer-assisted navigation, specially designed instruments and precise diagnostic tools provide alternatives to conventional open spine surgery that may minimize patient recovery time and pain.

MAST procedures mean surgeons may achieve the same results and objectives of traditional surgery with imaging systems, tiny cameras and skin incisions no longer than

thumbnails. Muscle is left intact and only separated, or "split," along natural divisions to reach the affected area. Special live-action x-ray machines guide surgeons to exact locations on the spine, rendering moot any need to open the site for clear visualization and location of the spinal problem. MAST products provide surgeons the ability to work precisely in smaller surgical fields with significantly less tissue trauma. The potential patient benefits of MAST procedures can offer patients physical, psychological, emotional and aesthetic advantages that make surgery less daunting.

Potential patient benefits of MAST procedures:

- Quicker return to normal activities
- Less post-operative pain
- Less damage to muscle and skin
- Easier rehabilitation
- Smaller scars
- Less blood loss
- Outpatient surgery for some patients

Medtronic Sofamor Danek, the global leader in spinal instrumentation, has recently developed these MAST products:

- CD HORIZON® SEXTANT™ Spinal System for spinal fusion
- METRx™ System for herniated disc repair
- CD HORIZON® ECLIPSE™ Spinal System for the correction of scoliosis

Clinical Experience

Minimal Access Spinal Technologies are part of a new minimally invasive area in spine surgery, and the results of surgeries performed with these procedures have yet to be fully studied. However, preliminary studies for MAST procedures indicate very high levels of patient satisfaction, shorter recovery periods and minimal post-operative pain. While the results have been promising, the full benefits and superiority of MAST procedures over traditional open surgeries have not been established.

Resources

www.back.com

www.medtronicsofamordanek.com



