Minimally Invasive Spine Surgery (MIS) Techniques

Minimally Invasive Surgery (MIS) is the concept of performing a standard surgery through a smaller incision. It has been used in many different types of surgery with some encouraging results. An example is when treating an appendicitis. Years ago, a general surgeon would remove the appendix through a five-centimeter (two-inch) incision. Today, this is done through a couple of one-centimeter cuts with the use of a special tool called a scope. Patients often can go home one day after surgery compared to three or four days in the past.

Over the last two decades, methods have been developed to perform Minimally Invasive Spine Surgery (MISS). This has become a common approach for adults with arthritis of the spine. The MISS approach works well for this problem because only a short part of the spine needs treating. Similarly, this approach works well in spine fractures. MISS may result in less bleeding, lower risk of infection, less pain after surgery, and a quicker recovery.

Special tools and implants are required to be able to perform MISS. These tools together with computer guidance enables MISS to be performed through several small incisions. The goal is still to achieve a spinal fusion. Scoliosis and kyphosis surgery, for both adults and adolescents, often involves a longer section of the spine. This makes MISS more challenging. In recent years, some surgeons have been able to perform MISS for these longer surgeries. Early results are mixed with less bleeding but no improvement in recovery or pain. Long-term results of this approach need to become available before we know how it compares to current surgeries.

References:

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