

Instrumentation in Spinal Surgery

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Abstract

As a result of rapid advances in the field of spinal instrumentation, the surgeon today has at his disposal many well-designed implants, such as pedicle screws, hooks, rods, plates, and interbody fusion devices. Many of these implants are modular and are used in combination, such as hooks and screws attached to rods, allowing the surgeon flexibility in selecting the appropriate implants to meet the particular needs of the patient. Spinal instrumentation restores or enhances the mechanical stability of the spine, corrects and maintains spinal alignment, and enhances spinal fusion. The disadvantages associated with the use of instrumentation include increases in cost, operative time, infection rate, re-operation rate, and a steep learning curve. As spinal instrumentation is evolving constantly, it is important to understand the surgical indications and principles of its use. Being highly trained and familiar with the use of these implants is the only sure way to avoid the potentially serious complications that have been associated with their use.

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