Treatment of Thoracic and Lumbar Spine
and Spinal Cord Injuries

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With 10 Figures

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1. General Data

Following the pioneering work of Sir Ludwig Guttmann great efforts and researches have been made concerning thoraco-lumbar spine and spinal cord injuries.

However, great controversy still surrounds the management of both the neurological and the bony injuries. Guttmann (1949, 1954, 1973), his pupils, and others such as Bedbrook (1969), Burke et al. (1976), Frankel et al. (1969), claim that open spinal surgery has no role to play.

They focussed their attention on the important role of reduction and stabilization of the spine, and less so on the persistent presence of bone and discal fragments retropulsed into the spinal canal.

The aim of nonsurgical treatment is to restore normal anatomical alignment by "postural reduction", and permits stabilization by spontaneous interbody fusion, which occurs during a period of prolonged bedrest, 8 to 12 weeks (Hardy 1965).

A major shortcoming of this method is that any injudicious handling during the early postinjury period may cause displacement of an unstable fracture and reinjure nerve roots that still retain a high potential for recovery.

Highly motivated, vigilant, and expert nursing in a specialized spinal care unit is essential to diminish the incidence of complications.

Furthermore, hospitalization is prolonged, and intensive rehabilitation efforts must be delayed until the patient can be safely allowed out of bed.

Holdsworth (1953, 1963) shared Guttmann's opinion regarding the prime necessity for spinal stability. Regarding unstable fractures, he ensured early spinal stability by surgical stabilization and realignment of the fracture by means of internal fixation with plates bolted to the spinous processes.

This surgical attitude has been stressed by many authors, who have presented convincing evidence that secure and adequate stabilization of unstable thoracic and lumbar spine fractures promotes speedier rehabilitation, easier nursing care, and decreased complications (Böhler 1956, 1970, Dickson et al. 1973, Flesch et al. 1977, Harrington 1967, 1973, Katzenelson 1969, Kaufer et al. 1966, Kelly et al. 1968, Roberts et al. 1970).

Guttmann and Holdsworth did not appear to fully appreciate the direct