Book Review


In a recent text, the thoracic spine was described as an enigma due to the limited research and clinical focus on this region of the spine (Singer and Giles 2000). Consistent with this, The Thorax – An Integrated Approach is unique, as it is the only clinical manual therapy text devoted to the thoracic spine. Now in its second edition, the method of clinical examination and treatment has been substantially updated in line with developments in the author's method of practice and related biomedical research.

The first issue to draw my attention was that the model of thoracic spine and ribcage function is based almost entirely on studies of the lumbar spine and sacroiliac joints. This seems at odds with anatomical and biomechanical models, which highlight the structural and functional differences between these regions. The anatomy chapter emphasises the morphology of the skeletal elements and joint surfaces. Only a short paragraph deals with the intervertebral disc. This is consistent with emphasis on the posterior elements in the biomechanical models and classification of thoracic “dysfunction”. Thoracic myology is presented according to the local and global muscle classification of the lumbar spine. The local group (rotatores, multifidi, intercostals) are suggested to have a stabilising role, yet there is no detail of the specific movements controlled or “stabilized” by these muscles. Little is known about the function of thoracic muscles, and emerging research suggests that the function of the deep muscles differs from equivalent groups in the lumbar region (Bojadsen et al 2000).

The contrast between spinal regions is more striking in the summary of movement patterns of the thoracic motion segments and ribs. The complex interaction between spine and ribcage is clearly demonstrated, but less emphasis is given to the inherent stability of the thoracic region. The stability afforded by the ribcage and other elements suggests that mechanical instability of a thoracic motion segment would require trauma such as rib or sternal fracture. Despite this, “instability” of the thoracic motion segment is one of the patterns of clinical presentation described. While somewhat complex, the biomechanical model of the thoracic spine and ribcage is based on key cadaveric and in-vivo studies and provides a good summary of the articular mechanics of the thorax.

The second section describes the method of physical examination, interpretation of the examination findings underlying the clinical classification, and methods of treatment. There is an assumption that the reader has knowledge of the indications for physiotherapy treatment, and features which indicate that medical screening before commencing physiotherapy management. While this is reasonable, a brief review of the non-mechanical causes of thoracic pain would have been a good, in addition to the author's thoughts on "mechanical" disorders which may not respond to this method of management.

A strength of this text is the proposed classification system as the basis for interpretation of clinical presentation and treatment prescription. The system is based on impairments of two key aspects of spinal function; movement and load transfer. I was initially enthusiastic about this system, however, the terminology used to define the classification system is confusing, and the criteria for each category are not well described. The three groups are: i) excessive articular compression (joint hypomobility), ii) excessive compression with underlying instability (joint is fixed in an abnormal position but is functionally unstable), and iii) insufficient articular compression (excessive mobility or poor control of normal segment motion). The concepts of movement and load transfer appear to be confused in this system, and the focus is limited to the posterior spinal and costal joints. Validation of the classification system and the biomechanical concepts underlying may be difficult.

The highlight of the text is the chapters which describe the treatment methods. Spinal and rib joint mobilisation and manipulation, and muscle energy “release” techniques are clearly described and supported by illustrations. These techniques would be widely applicable in the treatment of joint hypomobility in the thoracic region. The chapter on therapeutic exercise is very well presented. It provides a framework for exercise prescription complete with specific retraining exercises, a method of exercise progression and instructional cues for the patient. The treatment methods and exercises are all included in a CD-ROM.

While the overall interpretation of thoracic pain disorders and the clinical method in this text may not appeal to all, the methods of treatment and exercise would be of value to most physiotherapists treating patients with mechanical pain disorders of the thoracic spine and rib cage.

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References