## Diagnosis and injection techniques in orthopaedic medicine - Dorman TA, RavinTH. Williams & Wilkins Publishing Co.

This text is written by two medical practitioners from California and Colarado, USA. They also acknowledge other MD's that have given assistance. They have had 'guidance' from other paramedical groups who have qualifications of DO and DPM. These are not certified medical practitioners which at times is reflected in the paucity of scientific evidence. This is admitted in the foreward and preface of the book where they admit that there is lack of supportive data on many of the techniques described. They state that this book is the most comprehensive in this area but, with such a statement admitting lack of scientific data, it must by definition not be classified as a reference text. As one reads through the ensuing chapters, the descriptions of physical examination and anatomy are good and comprehensive. Unfortunately later portions of each chapter describing pathology and treatment can be scientifically incorrect. For example, they state that a haemarthrosis converts into a intra-articular blood clot. However there is thrombolysin in synovial fluid so this does not occur. A haemarthrosis can be aspirated many days after the primary bleed. The fibrosis of the capsule that they describe in association with haemarthrosis can occur but this is associated with bleeding within the surrounding soft tissues rather than intra-articular bleeding.

Many of the chapters describe a form of treatment known as prolotherapy, a type of sclerosing therapy described by Hackett in 1958. After thirty years there is still little scientific evidence through controlled studies of the efficacy of this technique, even though the literature abounds with papers of "clinical experience" which the authors admit are often anecdotal accounts. The chapter on the lumbar spine is extensive and generally comprehensive. Unfortunately some radiological parameters have been taken out of context, eg. Cobb's method of measuring spinal rotation was originally described for a structural scoliosis rather than the scoliosis associated with back pain syndromes. Unfortunately as this chapter unfolds, the role of the sacrum becomes over-emphasised. Such concepts like sacral torsion may be seen on a CAT scan but can be a normal variation since one half of the body does not have to be a perfect mirror image of the other. The discussion around various different pain syndromes within the lumbar spine is good but again the position of the sacrum as an aetiological factor in many of these pain syndromes has not been scientifically proven. Unfortunately some terminology has been incorrectly sited. In particular when discussing prolapsed lumbar intervertebral discs they have a section titled 'fourth lumbar root'. It is stated that this accounts for 60% of disc prolapses. This should in fact read that 60% of lumbar prolapses occur at the L4/5 disc space or motion segment. The commonest prolapse is the postero-lateral prolapse which affects the fifth lumbar nerve.

This area of the text therefore is confusing because their anatomical principles do not reflect pathological processes. This is further reflected in the summation made of the various percentages of disc prolapses which come to 108%. They state that a 'list' of the lumbar spine that clinically is recognised so often by practitioners has never been explained scientifically. This, unfortunately is not true because Macnab in his text entitled 'Backache" (1977, Williams and Wilkins Co., Baltimore) explains how a list may occur to the side of the prolapse or in the other direction. The section on spinal manipulation is to admit that manipulation should not be done when there are bowel and bladder symptoms, but unfortunately they do not emphasise the fact that this is a serious condition usually requiring urgent investigation and surgery ("the cauda equina lesion"). The section of spinal stenosis is small and could have been omitted because no mention of surgical treatment (often the treatment of choice) is made for the treatment of neurogenic claudication. They in fact advocate 'proliferant therapy'. The same could be said about the section on spondylolisthesis which has no mention of indications for surgical management. This is peculiar when the following section is titled 'failed back surgery'. Other chapters on various sections of the upper and lower limb, once again give good anatomical descriptions and a good summary of various conditions. Unfortunately occasionally such discussion is marred by dangerous techniques eg. steroid injection being advocated for fractured shoulders and repeated on many occasions over the ensuing days. Steroids, of course can decrease osteogenesis and bone healing and increase the risk of infection. Injection techniques are also described in the treatment of Osgood Schlatter's disease, a paediatric condition of a traction apophysitis of the tibial tubercle. This condition generally does not require such invasive therapy and steroids may superimpose an unacceptable morbidity in the management of such a condition. Likewise in the distal portion of the lower limb, unfortunately no mention is made of subtalar instability which is a clinical disorder becoming increasingly recognised particularly within the area of sports medicine. It is surprising that with the advice of padiatrists that more discussion in the foot is not given to the position of the forefoot and hindfoot and the effects on foot function. This has particular relevance in the discussion on plantar fasceitis because such a condition does not just reflect foot function but also function within the hamstrings and Achilles tendon which are not incriminated in this text. The cervical spine is an extensive area covered by this book and at times is comprehensive. Unfortunately a lot of the date and references quoted are from anecdotal reviews and are not scientifically proven. A good example is the use of a term which is unscientific, non-anatomical and clinically unproven like 'mini-subluxation'.

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