Annotation

A return to nature – The futility of surgery for burst fractures **1. Introduction**

A crisis has developed in New Delhi. The Prime Minister has fallen down the stairs in Parliament and sustained a burst fracture of L1 without any neurology. Panic has set in. Transferred by helicopter to the best Hospital in India, he is surrounded by Spinal Surgeons. What operation should he have? Who is best qualified to operate on the most important man in India? Meantime in a rural village in Bittar, a poor impoverished farmer has fallen from a tree and sustained a burst fracture of L1 similar to the Prime Minister. He is able to walk home and he rests in bed. There is no access to any medical treatment whatsoever. After a few days his pain subsides and he gets up and slowly returns to work. Who has fared best? The Prime Minister and high technology, or the peasant farmer with Mother Nature? The peasant wins hands down. At least he has not been screwed nor robbed!

Vertebral fractures seldom worry me. Soft tissue injuries such as dislocations, soft tissue chance injuries certainly do concern me to the extent that I stabilise them all. There is a fundamental difference between a fracture of the spine and a dislocation. One heals without undue concern. The other is deadly. Fractures are far, far more common than dislocations so surgery should be an infrequent occurrence in spine trauma. Unfortunately the reverse is true. Why is this the case? In a word money. Ask yourself why at spine trauma symposia the world over, non-operative treatment is seldom mentioned. At coffee time you will see the answer, when surrounded by implant company stalls. You will not be sponsored to tell the truth.

Vertebral body fractures i.e. compression fractures and burst fractures are fractures of cancellous bone. Nature heals such fractures by collapse or in spinal terms kyphosis. The degree of kyphosis has no bearing on outcome. So why try to treat it? A tension band of a spinal fracture without addressing the compression side i.e. an anterior buttress is to invite return to the original fracture configuration. Hence more and more screws affecting multiple segments to treat a single level fracture. Just because it is easier to insert pedicle screws than an anterior strut does not justify the illogical! You defy nature and basic science at your peril or as my mother puts it “you cannot fart against thunder”. Best not to fart at all!

Ignorance is bliss. It is ironic that the great advances in imaging i.e. CT and MRI have led us astray. When burst fractures were treated as wedge compression fractures before the days of scans, life was simple. Burst fractures were treated with plaster casts and mobilisation. No harm resulted. All of a sudden, we were

confronted with CT scans showing the spinal canal full of bone fragments. Logic went out of the window. Now the spinal canal was full of dangerous bone. The dangerous time i.e. at the time of injury had long since passed but this was brushed aside. The canal had to be cleared with direct surgery or indirectly by so called ligamentotaxis. Such needless treatment came at great cost. The degree of canal occlusion in burst fractures has no bearing on outcome and is no threat to neurology. It is time to stop treating scans and treat patients instead.

The spinal cord and peripheral nerves can tolerate slow compression even if it is severe. One only has to think of Tuberculosis in the spine centrally and tardy ulnar nerve palsy at the elbow peripherally to see how the nervous system tolerates slow compression. The exact opposite occurs when there is a severe and sudden insult to the spinal cord. Even then with appropriate non-operative care a welcome degree of recovery is to be expected in at least 60% of Frankel B cord injuries. My experience in spinal cord damage confirmed to me in no uncertain terms that the injured spinal cord cannot tolerate the erect position. In other words the impaired physiological regulation of the cord blood supply cannot cope with gravity. To deny this basic fact is to deny potential recovery. To mobilise the acute cord damaged patient quickly with or without surgery, borders on the criminally insane. Nature intended the paralysed patient to be supine for a period of weeks for very good reason. The only person who was able to defy this in my world was Jesus Christ. He could perform miracles. Even he was crucified for his efforts. I listen to the modern day Messiahs with their high technology efforts with a heavy heart. The patients however can pay a heavy price.

Much has been written about fractures of the spine. Forests have been denuded publishing all these articles including this one. Whatever the message, it will be ignored. Until the advent of primitive internal fixation devices in the early 1950's nothing much was ever written about burst fractures. Scan the index of the American Bone and Joint from its inception until the mid-1950's and you will struggle to find any article on burst fractures. There was no reason to study this condition because there was no problem. Problems only started with implants, “advances” in imaging and classification. All have caused nothing but complications from needless interventions. We have played on the fear in patients with “a broken back”. Denied the option of a do nothing option but offered the option of surgery to prevent paralysis etc. what do you think happened? You have to wonder if the multitude of papers expounding the benefits of conservative treatment^{1,2} have ever been read? Maybe the only people to read papers and those who write them. After my recent article describing rapid mobilisation of burst fractures with the results clearly suppling non operative treatment and recorded on video, I thought stupidly that patients could be spared needless costly and dangerous surgery. With this in mind I sent copies of my article to the Minister

of Health, the Chief Executive of NHS England, the Director of National Institute of Clinical Excellence, the President of BASS (British Association of Spinal Surgeons) and the President SBNS (Society of British Neurosurgeons). Months later I have not received a single reply. Perhaps I am paranoid.

There is an increasing awareness of outcomes in clinical practice given the massive increase in the cost of treatments. When I was asked at a Fellowship interview 30 years ago what was the greatest advance in orthopaedics, to stunned amazement I replied polio vaccination. Having worked in Hong Kong I explained that polio vaccination was 100% effective, had no side effects, lasted a lifetime and cost next to nothing. We can do the same with burst fractures and return to nature.

Conflict of interest

The author has none to declare.

References

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Received 11 May 2017
Accepted 3 June 2017
Available online 13 June 2017