

Abstract:

Topic: 'Surgical Failure in Personal Injuries'

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Goal: The Audience Will Understand:

1. The main reasons surgical interventions fail in patients with pain after personal injuries, especially in spine surgeries.
2. Common myths versus facts about treatment options in pain after personal injuries.
3. Scientific and 'evidence based' solutions to minimize failures.
4. Role of legal community in recognizing the factors at an early stage.

The burden of pain from musculoskeletal and neurological disorders, especially subsequent to personal injuries has been surging in terms of utilization of health care resources. Surgical intervention for these disorders is the most expensive armamentarium with resultant increase in cost, complications and disability. However when compared to the post-operative outcome (reduction in pain, less intake of opioids, improved function and reversal of disability), the data from evidence based medicine are not very encouraging. In this talk, the reasons for poor outcome will be highlighted with possible scientific solutions to minimize the poor outcome of invasive procedures. Though discussion will be limited to spine surgeries, the general principles can be extrapolated to surgeries of peripheral joints.

The main indications for spine surgeries are intractable disabling pain that has been refractory to conservative non-surgical treatment and oral medications, worsening neurological deficit and instability of spine with or without fracture. The first one is the last resort while the latter two may be the initial treatment options.

The reasons for failure of surgeries can be classified as pre-operative, intra-operative and post-operative.

The pre-operative reasons include inadequate conservative treatment, initial under treatment of pain, and development of hypersensitivity of central nervous system. Once patient's pain becomes chronic, mere focusing on treatment and restoration of damaged tissue will not result in successful outcome. Since MRI and other imaging studies may not correlate highly with symptoms and, electrodiagnostic studies may confound the clinical scenario, patient selection based on these modalities may also be one factor for poor outcome. 'Failure to precisely identify pain generators' can also be blamed as a culprit in bringing less than adequate surgical outcome. Another big share in poor outcome emanates from pre-existing spine conditions and presence of comorbidities like obesity, metabolic syndromes, and addiction of opioid.

Intraoperative selection of procedure is also another major reason for failure of surgical procedures. Though technology could be fascinating, new modalities of minimally invasive and intardiscal

procedures have also added to the list of factors leading to poor outcome of surgical interventions. Since these surgical procedures have become easier to perform because of technology, more specialists other than surgeons are performing them without serious considerations to pain generators, thus leading to poor outcome.

Lack of understanding of biomechanical restoration of function post-operatively through rehabilitation is another big reason for surgical failure. The intensity of this failure multiplies when it is coupled with high and unrealistic expectations from surgery by the patients who have not been explained well the details of the procedures and post-op rehabilitation.

Detailed history and initial examination with focusing on pre-existing imaging and degenerative changes, calculated and focused active physical therapy, meaningful use of neuromodulatory medication along with precise identification of pain generators are the best strategic interventions to be done prior to surgery. Coordination among the physiatrists, pain specialists, therapists and surgeons can minimize the chances of unnecessary complications and poor outcome.

Moreover the legal, medical and business paradigms have to be kept in refined balance. If any one of these overrides other factors, the surgery may fail to provide its intended goals.

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