

## Editor Note: Journal of Spine Vol 5 Issue 6

Alessandro Landi\*

Department of Neurology and Psychiatry, Division of Neurosurgery, "Sapienza" University of Rome, Italy

\*Corresponding author: Alessandro Landi M.D, PhD, Department of Neurology and Psychiatry, Division of Neurosurgery, "Sapienza" University of Rome, Viale del Policlinico 155, Rome 00161, Italy, Tel: +3906 49979105; Fax: +3906 49979105; E-mail: dott.alessandro.land@gmail.com

Rec date: Dec 20, 2016; Acc date: Dec 24, 2016; Pub date: Dec 28, 2016

Copyright: © 2016 Landi, et al. This is an open-access article distributed under the terms of the creative commons attribution license, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

### Editor Note

Spine or vertebrae holds the crucial role in neurological manifestation and axial balance. The same also represents the determining characteristic feature of vertebrata. Physiologically spine consist major functional attribute related to peripheral nervous system. It has been shown that, manipulation of spinal cord architecture either by accidental event or genetic reason is associated with various lethal diseases and hence, utmost research importance has been given to this particular field of neurobiology. Outcome of which, has been provided appreciable life support to mankind. The current issue of the Journal of Spine is a mélange of various studies dealing with neurological diseases such as Parkinson's, Pudendal neuralgia, congenital vertebral anomalies, and lower back pain. All the articles in this issue describe the treatment strategies and complications for these conditions. This issue of Journal of Spine brings to fore multiple interesting findings such as alleviation of pain in LFS by RF, creation of a prognostic index for calculating the probability of success of TDR, identification of upper airway obstruction as a novel complication in Parkinson's patients undergoing surgery, kidney agenesis in patient having multiple vertebral anomalies, LSPSL was minimally invasive at 2 years FU, successful treatment of PN by chiropractic intervention, and patient satisfaction with TDR at 5 years FU.

Lumbar facet syndrome (LFS) is a painful aggravation of the lower spine. To date, radiofrequency (RF) ablation of nerves of the lumbar facet joint has proved to be one of the effective modes of treatment of LFS. In order to verify the effectiveness of RF, Tsou et al. [1] conducted a randomized, open-label, controlled clinical trial where they quantified the levels of serum beta-endorphin in response to RF modulated denervation. The study consisted of two arms, the treatment arm (n=11) was subjected to RF and the control arm (n=14) received non-steroidal anti-inflammatory drugs (NSAIDs). The authors employed visual analogue scale to assess pain (VAS pain) in treatment versus control cohorts. Patients were evaluated at days 0, 7 and 28 days' post randomization. Patients in the treatment arm exhibited slight reduction in serum beta-endorphin levels as compared to the control on day 7 (38.5% versus 0, p=0.141) and day 28 (37.9% versus 0, p=0.621).

Lumbar total disc replacement (TDR) is an alternative of spinal fusion for the surgical treatment of lower back pain. Multiple factors negatively affect the post TDR clinical outcomes; therefore, there is a requirement for defining preoperative elements, which facilitate patient selection for lumbosacral TDR, in a quantitative or predictive manner. Towards this end, Schmidt et al. [2] worked towards the task of creating an index which can serve as prognostic by assigning weightage to various pre-operative elements. Using this index, the authors identified that long preoperative mean and posterior disc and the short anterior disc height are not conducive to patient satisfaction post TDR. This result supports previous findings of these authors,

suggesting that the index created by this group can act as a useful reliable prognostic tool for assessing the success or failure of TDR, prior to the surgery itself.

Following spinal surgery, Parkinson's disease patients are prone to higher risk of complications. These complications are of two types-the first includes surgery-related complications, such as infection, bleeding, epidural hematoma, and neurovascular injury, the second includes complications related to Parkinson's disease, such as postoperative delirium, urinary tract infection, and hypotension. Kobayashi et al. [3] reported a rare case of severe upper airway obstruction after remedial spinal surgery in a Parkinson's patient. Upper airway obstruction in Parkinson's patients had been reported only twice before. The airway obstruction in this report was attributed to worsening of Parkinson's disease itself as the patient had neglected taking the Parkinson's medication; a similar outcome was observed in a previous finding where the patient developed upper airway obstruction in response to withdrawal of Parkinson's medication post-surgery. Thus, aggravation of Parkinson's might ameliorate post-operative complications.

Congenital vertebral anomalies are common malformations of the spine (0.5-1/1000 live births, globally), which include alterations in the number and/or shape of the vertebrae. Though, individual abnormalities are usually observed in the populace, an amalgamation of various anomalies is rarely encountered. In this issue, Khanal et al. [4] present the case report of a 15-year-old male child exhibiting a combination of multiple vertebral deformities such as block-vertebra, hemi-vertebra, butterfly vertebra, absence of vertebrae S4 and S5, and the coccyx along with improper development of the left kidney. This is the first such report where amalgamation of various vertebral anomalies and kidney agenesis has been observed in a single individual.

Microscopic lumbar spinous process-splitting laminectomy (LSPSL) is the least invasive operative measure for patients with lumbar spinal canal stenosis (LSS). In this issue, Nomura et al. [5] examined the long-term outcomes of patients who underwent microscopic LSPSL with a follow-up period exceeding 24 months. The authors observed that as reported previously, microscopic LSPSL in patients was minimally invasive. Though, the recovery rate for patients aged greater than 79 years was relatively low, the authors conclude that this is acceptable considering the effects of age on general physical activity.

Pudendal neuralgia (PN) is a painful neurological condition characterized by burning vulval or vaginal sensation associated with tenderness over the course of the pudendal nerve. PN due to pudendal nerve entrapment (PNE) is associated with loss of mobility of the pudendal nerve over its pelvic or gluteal course. PNE is prevalent in approximately 1% of the population. Treatments for PNE include physiotherapy, neuropathic pain medications, body psychotherapy,

transcutaneous neuro-stimulation, and hypnosis. In this issue, Olson et al. [6] exploited the approach of chiropractic manipulative therapy and soft-tissue mobilization for treating a patient with PNE. Over the course of treatment (5 weeks), the patient's frequency and intensity of paresthesia resolved completely. The patient ceased to experience unwarranted genital stimuli and achieved better urinary and bowel function. The same was reflected in lower VAS scores at the time of re-evaluation. This is one of the rare case reports where conventional chiropractic intervention successfully resolved PN.

Total disc replacement was devised as an alternative to arthrodesis in degenerative disc disease (DDD) in patients suffering from persistent chronic back pain. TDR was designed so as to prevent the occurrence of adjacent segment disease, and is being increasingly exploited as a viable surgical option. Delecrin et al. [7] designed and conducted a clinical study to assess the safety and efficacy of second-generation mobile-core lumbar disc prosthesis. The study was a multicentric trial (n=411) having two parts; clinical and radiological, and had a five-year follow-up period. At the end of the five-year follow-up period, an improvement in every clinical outcome (QoL, VAS, ODI, medication, and professional status) was observed, these results were statistically significant. Patient satisfaction was steadily high throughout the five-year time-frame.

## References

1. Tsou HK, Kao TH, Tsai PA, Chen HT, Pan HC, et al. (2016) Serum betaendorphin changes in lumbar facet syndrome treated with radiofrequency lumbar facet denervation – A randomized controlled study. *J Spine* 5: 340.
2. Schmidt H, Dreischarf M, Strube P, Putzier M (2016) Preoperative segmental disc geometry as a possible predictor for the clinical outcome of lumbosacral total disc replacement. *J Spine* 5: 342.
3. Kobayashi T, Miyakoshi N, Abe T, Kikuchi K, Abe E, et al. (2016) Life-threatening upper airway obstruction as a complication of corrective spinal surgery in a patient with Parkinson's disease: A Case Report. *J Spine* 5: 348.
4. Khanal D, Sapkota KP, Shiwakoti R (2016) Amalgamation of various vertebral anomalies: A rare case report. *J Spine* 5: 350.
5. Nomura H, Yanagisawa Y, Arima J (2016) Long-term outcome of patients undergoing microscopic lumbar spinous process-splitting laminectomy. *J Spine* 5: 343.
6. Olson HM (2016) Diagnosis and conservative chiropractic care of chronic idiopathic pudendal nerve entrapment causing saddle-like paresthesia and restless genital syndrome: A case study. *J Spine* 5: 346.
7. Delecrin J, Beaurain J, Dufour T, Huppert J, Allain J, et al. (2016) A 5-year follow-up of a controlled mobile core lumbar disc prosthesis part 1: Clinical results. *J Spine* 5: 344.