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Editorial

Clinician-directed treatment guidelines



The United States of America Food and Drug Administration (US FDA) has come under scrutiny recently for hiding millions of incident reports for injuries and deaths related to medical devices for the last twenty years. This poses a challenge to the orthopaedic field that may face large ramifications to treatment and surgical options. One particular problem related to orthopaedic surgeons and released in the US FDA incident reports was the problem associated with metal-on-metal implants, which demonstrated undesirable side effects such as pseudotumours and high systemic concentrations of cobalt and chromium metal ions [1]. Although regulatory bodies such as the US FDA examine results provided in studies by researchers, clinicians, and industry, they do not have the benefit of working directly with patients. In some cases, conflict of interest can influence reporting by both clinicians and industry and impact the quality of published studies. When incidents occur that are reported to the regulatory body, change may occur too late to benefit current and future patients and effective treatment may lag.

Clinicians and researchers have been developing networks with the express aim of creating their own treatment guidelines and regulations. These networks are created by clinicians, for clinicians to benefit patients and ensure that treatment options are safe, efficacious, and have limited side effects. These guidelines are regularly updated based on translational studies and personal experiences by clinicians [2]. Spinal cord injuries (SCIs) cause long-term, debilitating conditions that affect numerous organ systems. There is currently no definitive cure or treatment, and patients are required to undergo long-term management of various health conditions that arise. Research is ongoing, and there have been numerous breakthroughs in treating SCIs [2].

The International Association of Neurorestoratology and Chinese Association of Neurorestoratology have developed guidelines for clinicians to handle SCIs. These guidelines provide information on evaluation, diagnosis, treatment, rehabilitation, etc. Furthermore, they introduce methods of restoring damaged neurological structure and functions using various strategies in acute, subacute, and chronic phases of SCI. In this issue, Huang et al. describe the updated 2019 version of these guidelines, with a thorough update and description of various guidelines. It is imperative to establish common strategies that clinicians can use and develop, to create novel and innovative strategies that best benefit the patients. By publishing these guidelines, we hope to better disseminate these therapeutic guidelines in order that more clinicians may adopt these common and well-researched practices for better patient care [2].

Such guidelines may also be adapted or considered for management of degenerative spinal disorders considering that spinal injuries may

contribute to such conditions. Osteoporotic vertebral compression fractures and lumbar isthmic spondylolisthesis may be better treated through continued discussions by researchers and clinicians to determine the most suitable treatment options and continued care [3,4]. Guidelines developed by panels of expert clinicians may help to better assess and disseminate this knowledge, leading to better overall treatment safety and efficacy.

Although government regulatory bodies are key in ensuring that patients are protected under the law, treatment guidelines that are created by a series of expert researchers and clinicians to be used by those same individuals, as well as many others will truly help to transform patient care and lead to innovative treatments.

References

- [1] Hjorth MH, Mechlenburg I, Soballe K, Roemer L, Stilling M. The correlation between activity level, serum-ion concentrations and pseudotumours in patients with metal-on-metal hip articulations and metal-on-polyethylene total hip articulations. *J Orthopaedic Transl* 2019;18:74–83.
- [2] Huang H, Young W, Skaper S, Chen L, Moviglia G, Saberi H, et al. Clinical neurorestorative therapeutic guidelines for spinal cord injury (IANR/CANR version 2019). *J Orthopaedic Transl* 2019;(20):14–24.
- [3] Pan M, Ge J, Li Q, Li S, Mao H, Meng B, et al. Percutaneous vertebral augmentation in special Genant IV osteoporotic vertebral compression fractures. *J Orthopaedic Transl* 2019;(20):94–9.
- [4] Peng P, Chen K, Chen H, Zhang K, Sun J, Yang, et al. Comparison of O-arm navigation and microscope-assisted minimally invasive transforaminal lumbar interbody fusion and conventional transforaminal lumbar interbody fusion for the treatment of lumbar isthmic spondylolisthesis. *J Orthopaedic Transl* 2019;(20):107–12.

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