



Now is the time to standardize the terminology of full-endoscopic spine surgery

Full-endoscopic spine surgery (FESS) is a minimally invasive technique in modern spine surgery. Historically, this technique was developed after percutaneous nucleotomy, which was introduced by Hijikata *et al.* in 1975 from the viewpoint of the operative approach [transforaminal approach (TFA)] (1). Furthermore, as this technique was initially applied for the treatment of lumbar disc herniation (LDH), the term “percutaneous endoscopic lumbar discectomy” (PELD) is mainly used in the medical literature. For example, a PubMed search using the keywords “percutaneous endoscopic lumbar discectomy” and “PELD” will yield a total of 183 articles. With the expanded application of this technique in other areas of spine surgery, the term “percutaneous endoscopic discectomy” (PED) was proposed by Mayer *et al.* in 1993 (2). However, a similar PubMed search using the keywords “percutaneous endoscopic discectomy” and “PED” yielded only 25 articles. The subsequent introduction of a high-speed drill for the spinal endoscope completely changed the operative scene. This technique can be applied for the treatment of not only LDH but also spinal canal stenosis (SCS). Currently, access to the lesion can be achieved through several different approaches [TFA, interlaminar (ILA), posterolateral (PLA), translaminar (TLA), and transpedicle approach (TPA)]. Therefore, there is no restriction with the use of the terms “percutaneous” and “discectomy”. Recent introduction of the term “biportal technique” makes the terminology even more difficult. FESS is the only term that encompasses these various aspects of the technique. However, a terminology that appropriately reflects the operative details is needed. If different authors will propose their own original term, it will cause confusion in the research field of FESS and will make performing meta-analyses of studies difficult. At this time, I already found a variety of terminologies, including percutaneous endoscopic lumbar interlaminar discectomy (PEID) (3), percutaneous transforaminal endoscopic discectomy (PTED) (4), percutaneous endoscopic thoracic discectomy (PETD) (5), full-endoscopic lumbar discectomy (FELD) (6), transforaminal endoscopic lumbar discectomy (TELD) (7), and percutaneous endoscopic lumbar discectomy with foraminoplasty (PELF) (8), and so on.

Although the term “endoscopic spine surgery” (ESS) was recently used by some investigators (9), the addition of “full-endoscopic” seems to make a better term in terms of distinguishing from endoscopic-assisted spine surgery procedures such as microendoscopic discectomy (MED). Furthermore, the term “full-endoscopic” was first proposed by Ruetten *et al.* and have been used for a long time (10). I also like this term because FESS has a similar sound to TESS (Transiting Exoplanet Survey Satellite; an all-sky survey mission that will discover thousands of exoplanets around nearby bright stars; <https://tess.mit.edu/>). FESS is an “inner mission” that will cure spinal disorders in a minimally invasive fashion.

This focused issue will introduce the readers to a wide variety of FESS terminologies in terms of target disease and treatment approaches. I have proposed and used one such terminology in my article [full-endoscopic discectomy (FED) for LDH, full-endoscopic laminectomy (FEL) for SCS: the term or abbreviation for the detailed approach should be added using a hyphen: -TFA, -ILA, -PLA, -TLA]. This is only my tentative idea. I hope that this focused issue will provide an opportunity to standardize the detailed FESS terminology for further development.

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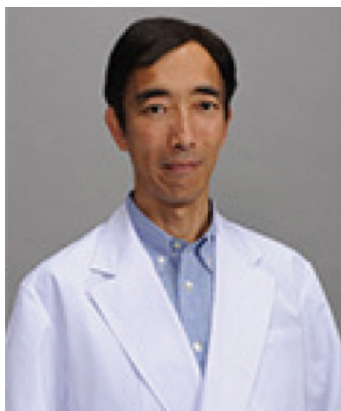
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