

Technologies in Spine Surgery

Murat Yildirim

Aichi Spine Institute, Japan

Editorial

Interest in minimally invasive surgery (MIS) of the spine has driven the development of new and innovative techniques to treat an ever wider range of spinal disorders. Despite these new advances, spine surgeons have been slow in adopting MIS into their clinical practice. This study aims to provide a better understanding of the factors that have led to limited incorporation of these procedures into their practices. Eighty-seven spine surgeons completed a questionnaire related to their perceptions of MIS. Respondents were asked to comment on their perceptions regarding the limitations and advantages of minimally invasive spine surgery. Survey results were then analysed for both overall opinions and opinions based on the amount of MIS utilization in the respondents' current practices. The top 3 identified limitations of MIS of the spine were technical difficulty, lack of convenient training opportunities, and radiation exposure.

Of these respondents, spine surgeons experienced in MIS were concerned more with radiation exposure than the lack of training opportunities. In contrast, spine surgeons with little MIS experience cited the lack of training opportunities as the most significant limitation. There was little concern related to the limited proven clinical efficacy of MIS of the spine. Technical factors, training opportunities, and radiation exposure appear to be the major obstacles to MIS of the spine. Most spine surgeons believe that MIS leads to faster return to daily activities, better long-term function, and decreased hospitalization.

This may explain why most surgeons did not cite a lack of proven efficacy as a major limitation to MIS. These findings indicate that the widespread adoption of MIS of the spine will likely be driven through relatively simple means, such as improved training programs that strive to decrease the technical difficulty and limit radiation exposure of these procedures. It is unlikely that extensive clinical data alone, without such improved training programs, will be sufficient to drive widespread use of minimally invasive spine surgery. Our study design utilized a survey collected from attendees of the 2007 Spine Arthroplasty Society meeting in Berlin, Germany.

Surveys were distributed to attendees during the "Symposium on Minimally Invasive Spine Surgery" session of the meeting on May 6, 2007, and were collected after the session. In an effort to facilitate completion of the form by surgeons, the questionnaire was limited to one page with 7 multiple choice questions. From approximately 150 spine surgeon attendees of the session, 87 responses were received. Information ascertained from the survey included each respondent's practice environment, the amount of MIS in their communities, their current use of and perceptions about MIS, and their beliefs about the future of MIS. The survey was intended to assess general perceptions about MIS technology, and thus no specific definition was given for the type of MIS procedure. Surveys were printed in paper format, and respondents were asked to circle their answers to survey questions. Some survey questions required single responses and other questions asked respondents to indicate their top 3 responses (ranking not specified).

How to cite this article: Murat Yildirim. "Technologies in Spine Surgery." J Spine 10 (2021): 487

***Address for Correspondence:** Murat Yildirim, Aichi Spine Institute, Japan, Tel: 7457689712; E-mail: murat.yildirim@gmail.com

Copyright: © 2021 Yildirim M, 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.

Received 10 June 2021; **Accepted** 17 May 2021; **Published** 24 May 2021