

Case series

Few studies have reported direct comparative data of [lumbar spine](#) angles between [direct lateral interbody fusion \(DLIF\)](#) and [oblique lateral interbody fusion \(OLIF\)](#). The purpose of the study of Ko et al., was to investigate the clinical and radiological [outcomes](#) of DLIF and OLIF, and determine influential factors.

The same surgeon performed DLIF from May 2011 to August 2014 (n=201) and OLIF from September 2014 to September 2016 (n=142). Radiological parameters, [cage height](#), [cage angle \(CA\)](#), [cage width \(CW\)](#), and [cage location](#) were assessed. They checked the cage location as the distance (mm) from the anterior margin of the [disc space](#) to the anterior [metallic indicator](#) of the cage in lateral images.

There were significant differences in [intervertebral foramen height \(FH\)](#); 22.0 ± 2.4 vs. 21.0 ± 2.1 mm, $p < 0.001$) and [sagittal disc angle \(SDA\)](#); 8.7 ± 3.3 vs. $11.3 \pm 3.2^\circ$, $p < 0.001$) between the DLIF and OLIF groups at 7 days [postoperatively](#). CA (9.6 ± 3.0 vs. $8.1 \pm 2.9^\circ$, $p < 0.001$) and CW (21.2 ± 1.6 vs. 19.2 ± 1.9 mm, $p < 0.001$) were significantly larger in the OLIF group compared to the DLIF group. The cage location of the OLIF group was significantly more anterior than the DLIF group (6.7 ± 3.0 vs. 9.1 ± 3.6 mm, $p < 0.001$). [Cage subsidence](#) at 1 year postoperatively was significantly worse in the DLIF group compared to the OLIF group (1.0 ± 1.5 vs. 0.4 ± 1.1 mm, $p = 0.001$). Cage location was significantly correlated with postoperative FH ($\beta = 0.273$, $p < 0.001$) and postoperative SDA ($\beta = -0.358$, $p < 0.001$). CA was significantly correlated with postoperative FH ($\beta = -0.139$, $p = 0.044$) and postoperative SDA ($\beta = 0.236$, $p = 0.001$). Cage location ($\beta = 0.293$, $p < 0.001$) and CW ($\beta = -0.225$, $p < 0.001$) were significantly correlated with cage subsidence.

The cage location, CA, and CW seem to be important factors which result in the different-radiological outcomes between DLIF and OLIF ¹⁾.

¹⁾

Ko MJ, Park SW, Kim YB. Effect of Cage in Radiological Differences between Direct and Oblique Lateral Interbody Fusion Techniques. J Korean Neurosurg Soc. 2019 May 8. doi: 10.3340/jkns.2018.0142. [Epub ahead of print] PubMed PMID: 31064045.

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