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# Corrigendum: Can oblique lateral interbody fusion (OLIF) create more lumbosacral lordosis in lumbar spine surgery than minimally invasive transforaminal interbody fusion (MIS-TLIF)?

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## KEYWORDS

OLIF, posterior pedicle screw fixation, OLIF standalone, lumbar degenerative disease, lumbosacral lordosis

## A Corrigendum on

[Can oblique lateral interbody fusion \(OLIF\) create more lumbosacral lordosis in lumbar spine surgery than minimally invasive transforaminal interbody fusion \(MIS-TLIF\)?](#)

By Li J, Chen Y, Wu H, Gan K, Bei D, Fan T, Chen J and Chen B. (2023) Front. Surg. 10:1063354. doi: 10.3389/fsurg.2022.1063354

## Error in Figure/Table

In the published article, there was data errors in [TABLE 1 The comparison of general basic data of OLIF and MIS-TLIF] as published. [The data in column “age”, “BMI”, “Operation time”, “Intraoperative bleeding”, “LL, deg.,” “FSL Correction”, “VAS” and “ODI” were incorrectly calculated.]. The corrected [TABLE 1 The comparison of general basic data of OLIF and MIS-TLIF] appear below.

In the published article, there was data errors in [TABLE 2 The general comparison of OLIF and MIS-TLIF with different number of fused segments] as published. [The data in column “Operation time”, “Intraoperative bleeding”, “LL, deg.,” “FSL Correction” were incorrectly calculated.]. The corrected [TABLE 2 The general comparison of OLIF and MIS-TLIF with different number of fused segments] appear below.

In the published article, there was data errors in [Table 3 The General comparison of OLIF + PSF, OLIF Standalone and MIS-TLIF] as published. [The data in column “Operation time”, “Intraoperative bleeding” were incorrectly calculated.]. The corrected [Table 3 The General comparison of OLIF + PSF, OLIF Standalone and MIS-TLIF] appear below.

In the published article, there was data errors in [Figure 5. Post-operative correction of LL, FSL, in OLIF + PSF, OLIF Standalone and MIS-TLIF. A. LL Correction. B. FSL

TABLE 1 The comparison of general basic data of OLIF and MIS-TLIF.

Parameters	OLIF	MIS-TLIF	P
Sex, n, (M/F)	17/27	19/20	0.355
Age, years, mean + SD	66.7 ± 10.4	65.1 ± 11.3	0.505
BMI, kg/m <sup>2</sup> , mean + SD	22.9 ± 4.4	24.4 ± 5.0	0.155
Number of fusion Segments, n			0.445
Single segment	20	13	
Two segments	14	13	
Three segments	10	13	
Posterior PSF, n, (yes/no)	20/24	39/0	<b>0.000</b>
Operation time, min, mean + SD	189 ± 83	229 ± 80	<b>0.028</b>
Intraoperative bleeding, ml, mean ± SD	113 ± 138	421 ± 210	<b>0.000</b>
Blood transfusion, n, (yes/no)	3/41	10/29	<b>0.019</b>
<b>LL, deg, mean + SD</b>			
Preoperative	36.2 ± 14.2	41.0 ± 9.6	0.077
Postoperative	42.0 ± 12.4	45.0 ± 8.7	0.205
Correction	5.8 ± 9.8	4.0 ± 6.1	0.328
FSL Correction, deg, mean + SD	4.8 ± 7.2	4.9 ± 4.7	0.930
<b>ADH, mm, mean + SD</b>			
Preoperative	7.5 ± 1.26	7.6 ± 1.72	0.762
Postoperative	11.15 ± 3.68	9.03 ± 1.24	<b>0.001</b>
Increase	3.65 ± 2.42	1.43 ± 0.48	<b>0.000</b>
<b>PDH, mm, mean + SD</b>			
Preoperative	7.21 ± 1.29	6.97 ± 1.43	0.628
Postoperative	8.93 ± 2.20	7.96 ± 1.13	<b>0.015</b>
Increase	1.72 ± 0.91	0.99 ± 0.30	<b>0.000</b>
<b>VAS, mean + SD</b>			
Preoperative	6.3 ± 1.9	6.5 ± 1.7	0.628
Postoperative	1.7 ± 1.4	1.6 ± 1.3	0.952
Improvement	4.6 ± 1.9	4.9 ± 1.9	0.616
<b>ODI, mean + SD</b>			
Preoperative	58.5 ± 16.9	57.0 ± 19.1	0.705
Postoperative	19.4 ± 12.2	17.6 ± 13.1	0.504
Improvement	39.1 ± 16.4	39.4 ± 15.2	0.916
Fusion	42	34	0.728
Complication	5	3	0.717
Transient psoas weakness	3	0	
Thigh weakness or numbness	2	0	
Neurological injury	0	2	
Wound infection	0	1	

BMI, body mass index; LL, lumbar lordosis; FSL, fused segmental lordosis; ADH, Anterior disc height; PDH, Posterior disc height; VAS, visual analog score; ODI, Oswestry dysfunction score.

Correction] as published. [The column length was changed because of incorrectly calculated data]. The corrected [Figure 5. Postoperative correction of LL, FSL, in OLIF + PSF, OLIF Standalone and MIS-TLIF. A. LL Correction. B. FSL Correction] appear below.

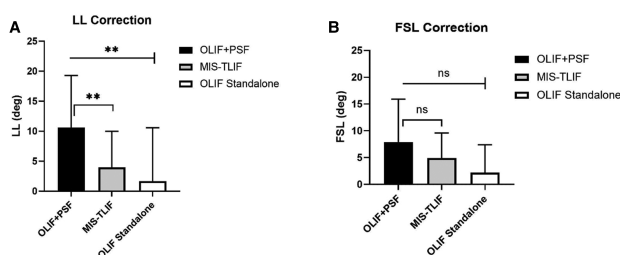


TABLE 2 The general comparison of OLIF and MIS-TLIF with different number of fused segments.

Parameters	OLIF	MIS-TLIF	P
Number	44	39	
<b>Single segment fusion</b>			
Operation time, min, mean ± SD	170 ± 75	167 ± 34	0.869
Intraoperative bleeding, ml, mean ± SD	87 ± 67	256 ± 161	<b>0.014</b>
Blood transfusion, n, (yes/no)	0/20	1/12	0.394
<b>LL, deg, mean + SD</b>			
Preoperative	41.6 ± 12.2	45.1 ± 11.8	0.417
Postoperative	45.8 ± 10.0	47.2 ± 10.9	0.715
Correction	4.2 ± 10.8	2.1 ± 4.1	0.495
FSL Correction, deg, mean + SD	4.1 ± 5.8	3.2 ± 4.3	0.647
ADH increase, mm, mean + SD	3.35 ± 2.13	1.23 ± 0.28	<b>0.000</b>
PDH increase, mm, mean + SD	1.62 ± 0.61	0.89 ± 0.21	<b>0.000</b>
<b>Two segments fusion</b>			
Operation time, min, mean ± SD	188 ± 84	210 ± 59	0.430
Intraoperative bleeding, ml, mean ± SD	98 ± 85	400 ± 100	<b>0.000</b>
Blood transfusion, n, (yes/no)	2/12	2/11	1.000
<b>LL, deg, mean + SD</b>			
Preoperative	36.6 ± 11.3	39.6 ± 6.6	0.402
Postoperative	43.5 ± 12.7	43.6 ± 7.7	0.981
Correction	6.9 ± 8.7	4.0 ± 6.0	0.326
FSL Correction, deg, mean + SD	5.6 ± 6.9	4.1 ± 4.7	0.529
ADH increase, mm, mean + SD	3.85 ± 2.62	1.43 ± 0.48	<b>0.000</b>
PDH increase, mm, mean + SD	2.32 ± 0.71	1.58 ± 0.15	<b>0.000</b>
<b>Three segments fusion</b>			
Operation time, min, mean ± SD	227 ± 89	309 ± 64	<b>0.018</b>
Intraoperative bleeding, ml, mean ± SD	239 ± 240	546 ± 207	<b>0.004</b>
Blood transfusion, n, (yes/no)	1/9	7/6	0.074
<b>LL, deg, mean + SD</b>			
Preoperative	25.0 ± 16.0	38.4 ± 9.2	<b>0.019</b>
Postoperative	32.3 ± 12.0	44.3 ± 7.3	<b>0.007</b>
Correction	7.2 ± 9.7	5.9 ± 7.5	0.706
FSL Correction, deg, mean + SD	5.0 ± 10.2	7.4 ± 4.4	0.468
ADH increase, mm, mean + SD	5.35 ± 2.32	2.41 ± 0.28	<b>0.000</b>
PDH increase, mm, mean + SD	3.72 ± 0.71	1.12 ± 0.41	<b>0.000</b>

TABLE 3 The general comparison of OLIF + PSF, OLIF standalone and MIS-TLIF.

Parameters	OLIF + PSF	MIS-TLIF	P	OLIF Standalone	P
Number, n	20	39		24	
Operation time, min, mean ± SD	243 ± 75	229 ± 80	0.513 <sup>a</sup>	143 ± 59	<b>0.000<sup>b</sup></b>
Intraoperative bleeding, ml, mean ± SD	128 ± 87	431 ± 210	<b>0.000<sup>a</sup></b>	119 ± 168	0.845 <sup>b</sup>
Blood transfusion, n, (yes/no)	2/18	10/29	0.192 <sup>a</sup>	1/23	0.583 <sup>b</sup>

The authors apologize for this error and state that this does not change the scientific conclusions of the article in any way. The original article has been updated.

**Text Correction**

In the published article, there was an error. [Some data was incorrectly calculated].

A correction has been made to [Abstract], [Method], [Paragraph 1]. This sentence previously stated:

“...mean age 65.8 years...”

The corrected sentence appears below:

“...mean age 66.0 ± 10.8 years...”

A correction has been made to [Abstract], [Results], [Paragraph 1]. This sentence previously stated:

“[The average operation time and intraoperative bleeding were significantly less in the OLIF group than in the MIS-TLIF group (163 ± 68 vs. 233 ± 79 min, 116 ± 148 vs. 434 ± 201 ml,  $P < 0.001$ ) ..... The correction of LL was significantly more in the OLIF + PSF group than in the MIS-TLIF group (9.9 ± 11.1 vs. 4.2 ± 6.1 deg,  $P = 0.034$ ).]”

The corrected sentence appears below:

“[The average operation time and intraoperative bleeding were significantly less in the OLIF group than in the MIS-TLIF group (189 ± 83 vs. 229 ± 80 min, 113 ± 138 vs. 421 ± 210 ml). ..... The correction of LL was significantly more in the OLIF + PSF group than in the MIS-TLIF group (10.6 ± 8.7 vs. 4.0 ± 6.1 deg,  $P = 0.005$ ).]”

A correction has been made to [Results], [Name of Sub-section if there is one], [Paragraph Number]. This sentence previously stated:

“[...while body mass index (BMI) was (23.6 ± 2.8) kg/m<sup>2</sup> in the OLIF group, which was lower than that of (25.0 ± 3.1) kg/m<sup>2</sup> in the MIS-TLIF group ( $P < 0.05$ ).]”

The corrected sentence appears below:

“[...while body mass index (BMI) was (22.9 ± 4.4) kg/m<sup>2</sup> in the OLIF group, which was lower than that of (24.4 ± 5.0) kg/m<sup>2</sup> in the MIS-TLIF group ( $P > 0.05$ ).]”

A correction has been made to [Results], [Operative time, intraoperative bleeding and blood transfusion], [Paragraph 1]. This sentence previously stated:

“[...(( $\chi^2 = 5.545$ ,  $P = 0.019$ )]”

The corrected sentence appears below:

“[...(( $\chi^2 = 5.545$ ,  $P = 0.019$ )]”

A correction has been made to [Results], [Preoperative and postoperative VAS and ODI scores], [Paragraph 1]. This sentence previously stated:

“[In the OLIF group, VAS decreased from to 6.2 ± 2.0 preoperatively to 2.0 ± 1.3 postoperatively, and ODI decreased from 50 ± 18 preoperatively to 15 ± 10 postoperatively (both  $P < 0.05$ ). In the MIS-TLIF group, VAS decreased from 7.0 ± 1.1 preoperatively

to 1.6 ± 1.3 postoperatively, and ODI decreased from 56 ± 16 preoperatively to 17 ± 15 postoperatively (both  $P < 0.05$ ).]”

The corrected sentence appears below:

“[In the OLIF group, VAS decreased from to 6.3 ± 1.9 preoperatively to 1.7 ± 1.4 postoperatively, and ODI decreased from 58.5 ± 16.9 preoperatively to 19.4 ± 12.2 postoperatively (both  $P < 0.05$ ). In the MIS-TLIF group, VAS decreased from 6.5 ± 1.7 preoperatively to 1.6 ± 1.3 postoperatively, and ODI decreased from 57.0 ± 19.1 preoperatively to 17.6 ± 13.1 postoperatively (both  $P < 0.05$ ).]”

A correction has been made to [Results], [Pre- and postoperative LL, FSL, ADH and PDH e], [Paragraph 1]. This sentence previously stated:

“[The LL correction was 4.0 ± 10.0 deg in the OLIF group and 4.2 ± 6.1 deg in the MIS-TLIF group ( $P > 0.05$ ). The FSL correction was 4.1 ± 7.0 deg in the OLIF group and 5.2 ± 4.6 deg in the MIS-TLIF group ( $P > 0.05$ ).]”

The corrected sentence appears below:

“[The LL correction was 5.8 ± 9.8 deg in the OLIF group and 4.0 ± 6.1 deg in the MIS-TLIF group ( $P > 0.05$ ). The FSL correction was 4.8 ± 7.2 deg in the OLIF group and 4.9 ± 4.7 deg in the MIS-TLIF group ( $P > 0.05$ ).]”

A correction has been made to [Results], [Pre- and postoperative LL, FSL, ADH and PDH], [Paragraph 2]. This sentence previously stated:

“[For three-segment fusion, the preoperative and postoperative LL in the OLIF group was significantly smaller than that in the MIS-TLIF group ( $t = 2.190$ , 2.661, both  $P < 0.05$ ), while the differences in the correction of LL and FSL were not statistically significant in both groups ( $t = 0.186$ , 0.303, both  $P > 0.05$ ).]”

The corrected sentence appears below:

“[For three-segment fusion, the preoperative and postoperative LL in the OLIF group was significantly smaller than that in the MIS-TLIF group ( $t = 1.831$ , 1.277, both  $P < 0.05$ ), while the differences in the correction of LL and FSL were not statistically significant in both groups ( $t = 0.984$ , 0.088, both  $P > 0.05$ ).]”

The authors apologize for this error and state that this does not change the scientific conclusions of the article in any way. The original article has been updated.