

Supplementary Material

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Table i. Hospital Anxiety and Depression (HAD) score three months postoperatively. < 8 low anxiety, > 8 high anxiety.

		TKA	BiUKA	p-value
n	Low Anxiety	29	23	ns
	High Anxiety	12	9	
AKSS, Mean (SD)	Low Anxiety	149.5 (37.4)	148.3 (29.7)	ns
	High Anxiety	129.6 (36.5)	115.4 (53.4)	ns
	p value	ns	0.03	
FJS, Mean (SD)	Low Anxiety	17.5 (9.7)	18.7 (13.4)	ns
	High Anxiety	8.7 (8.3)	11.3 (9.1)	ns
	p value	0.02	ns	
OKS, Mean (SD)	Low Anxiety	36.14 (8.8)	35.2 (7.9)	ns
	High Anxiety	26.2 (9.4)	26.7 (11.1)	ns
	p value	0.0035	0.023	
Pain VAS, Mean (SD)	Low Anxiety	1.7 (1.8)	1.8 (1.8)	ns
	High Anxiety	3.2 (2.1)	3.0 (2.6)	ns
	p value	ns	ns	
Stiffness VAS, Mean (SD)	Low Anxiety	2.6 (2.2)	2.7 (1.7)	ns
	High Anxiety	4.8 (2.3)	3.3 (2.6)	ns
	p value	0.006	ns	
EQ-5D-3L, Mean (SD)	High Activity	0.79 (0.2)	0.78 (0.1)	ns
	Low Activity	0.5 (0.3)	0.52 (0.3)	ns
	p value	0.001	0.010	
EQ-5D-VAS, Mean (SD)	Low Anxiety	85.2 (9.5)	83.9 (15.4)	ns
	High Anxiety	75.2 (17.4)	71.5 (16.0)	ns
	p value	0.040	0.030	
UCLA, Mean (SD)	Low Anxiety	4.7 (1.8)	4.8 (1.3)	ns
	High Anxiety	4.7 (2.1)	3.6 (0.7)	ns
	p value	ns	ns	
ROM, Mean (SD)	Low Anxiety	94.1 (22.4)	97.9 (103.9)	ns
	High Anxiety	100.9 (12.4)	87.3 (14.5)	ns
	p value	ns	ns	

AKSS, American Knee Society Score; BiUKA, biunicompartmental knee arthroplasty; EQ-5D-3L, EuroQol five-dimension three-level questionnaire; FJS, Forgotten Joint Score; ns, not specified; OKS, Oxford Knee Score; ROM, range

of motion; SD, standard deviation; TKA, total knee arthroplasty; VAS, visual analogue scale.

Table ii. HAD Depressed score three months postoperatively. < 8 low anxiety, > 8 high anxiety.

		TKA	BiUKA	p-value
n	Not Depressed	27	21	ns
	Depressed	14	11	
AKSS, Mean (SD)	Not Depressed	152.1 (30.3)	149.8 (25.1)	ns
	Depressed	127.4 (47.0)	121.6 (52.8)	ns
	p value	ns	ns	
FJS, Mean (SD)	Not Depressed	17.2 (9.8)	19.7 (12.9)	ns
	Depressed	10.7 (9.5)	11.7 (11.4)	ns
	p value	ns	ns	
OKS, Mean (SD)	Not Depressed	36.4 (8.1)	35.8 (6.9)	ns
	Depressed	27.1 (10.8)	28.1 (11.4)	ns
	p value	0.005	0.020	
Pain VAS, Mean (SD)	Not Depressed	1.7 (1.9)	1.6 (1.7)	ns
	Depressed	3.0 (2.1)	2.9 (2.4)	ns
	p value	ns	ns	
Stiffness VAS, Mean (SD)	Not Depressed	2.8 (2.3)	2.5 (1.8)	ns
	Depressed	4.1 (2.4)	3.5 (2.2)	ns
	p value	ns	ns	
EQ-5D-3L, Mean (SD)	Not Depressed	0.82 (0.1)	0.79 (0.14)	ns
	Depressed	0.47 (0.35)	0.58 (0.33)	ns
	p value	0.001	0.020	
EQ-5D-VAS, Mean (SD)	Not Depressed	87.3 (6.9)	85.6 (14.3)	ns
	Depressed	72.5 (16.4)	72.1 (16.7)	ns
	p value	0.001	0.008	
UCLA, Mean (SD)	Not Depressed	5.0 (1.8)	4.8 (1.3)	ns
	Depressed	4.1 (1.9)	3.9 (1.0)	ns
	p value	ns	ns	
ROM, Mean (SD)	Not Depressed	95.9 (20.8)	97.8 (13.3)	ns
	Depressed	96.1 (19.8)	88.9 (15.1)	ns
	p value	ns	ns	

AKSS, American Knee Society Score; BiUKA, biunicompartmental knee arthroplasty; EQ-5D-3L, EuroQol five-dimension three-level questionnaire; FJS, Forgotten Joint Score; ns, not specified; OKS, Oxford Knee Score; ROM, range of motion; SD, standard deviation; TKA, total knee arthroplasty; VAS, visual analogue scale.

Table iii. BMI three months postoperatively. < 35 low BMI, > 35 high BMI.

		TKA	BiUKA	p-value
n	High BMI	11	8	ns
	Low BMI	31	26	
AKSS, Mean (SD)	High BMI	140.3 (44.2)	145.2 (39.5)	ns
	Low BMI	147.5 (36.8)	135.4 (41.4)	ns
	p value	ns	ns	
FJS, Mean (SD)	High BMI	15.8 (10.7)	23.1 (10.8)	ns
	Low BMI	15.2 (10.0)	14.7 (12.9)	ns
	p value	ns	ns	
OKS, Mean (SD)	High BMI	33.0 (10.6)	33.6 (8.8)	ns
	Low BMI	33.9 (9.7)	31.8 (10.8)	ns
	p value	ns	ns	
Pain VAS, Mean (SD)	High BMI	1.9 (1.5)	0.8 (0.4)	ns
	Low BMI	2.2 (2.1)	2.7 (2.5)	ns
	p value	ns	ns	
Stiffness VAS, Mean (SD)	High BMI	2.7 (1.9)	2.5 (1.8)	ns
	Low BMI	3.4 (2.5)	3.2 (2.2)	ns
	p value	ns	ns	
EQ-5D-3L, Mean (SD)	High Activity	0.6 (0.3)	0.7 (0.2)	ns
	Low Activity	0.7 (0.2)	0.6 (0.3)	ns
	p value	ns	ns	
EQ-5D-VAS, Mean (SD)	High BMI	82.0 (17.5)	73.6 (20.4)	ns
	Low BMI	82.7 (10.7)	79.0 (21.4)	ns
	p value	ns	ns	
UCLA, Mean (SD)	High BMI	4.8 (1.7)	3.6 (1.2)	ns
	Low BMI	4.8 (1.9)	4.8 (1.3)	ns
	p value	ns	ns	
ROM, Mean (SD)	High BMI	95.9 (14.0)	93.7 (9.6)	ns
	Low BMI	96.0 (22.0)	95.6 (15.3)	ns
	p value	ns	ns	

AKSS, American Knee Society Score; BiUKA, biunicompartmental knee arthroplasty; EQ-5D-3L, EuroQol five-dimension three-level questionnaire; FJS, Forgotten Joint Score; ns, not specified; OKS, Oxford Knee Score; ROM, range of motion; SD, standard deviation; TKA, total knee arthroplasty; VAS, visual analogue scale.

Table iv. Trochlea Outerbridge grade three months postoperatively. Low = 0, 1, and 2, high = 3 and 4.

		TKA	BiUKA	p-value
n	Low	20	17	ns
	High	21	17	
AKSS, Mean (SD)	Low	148.2 (38.4)	138.7 (38.6)	ns
	High	144.2 (40.2)	136.2 (43.1)	ns
	p value	ns	ns	
FJS, Mean (SD)	Low	15.0 (10.5)	17.4 (14.7)	ns
	High	15.1 (9.7)	15.4 (11.4)	ns
	p value	ns	ns	
OKS, Mean (SD)	Low	33.0 (9.5)	32.2 (11.5)	ns
	High	34.8 (10.2)	32.1 (9.5)	ns
	p value	ns	ns	
Pain VAS, Mean (SD)	Low	1.9 (1.7)	2.2 (2.6)	ns
	High	2.3 (2.3)	2.4 (2.2)	ns
	p value	ns	ns	
Stiffness VAS, Mean (SD)	Low	3.3 (2.5)	2.7 (2.0)	ns
	High	3.2 (2.4)	3.3 (2.3)	ns
	p value	ns	ns	
EQ-5D-3L, Mean (SD)	Low	0.7 (0.2)	0.6 (0.3)	ns
	High	0.7 (0.2)	0.6 (0.2)	ns
	p value	ns	ns	
EQ-5D-VAS, Mean (SD)	Low	81.8 (13.7)	69.7 (26.4)	0.040
	High	82.8 (12.1)	84.2 (13.8)	ns
	p value	ns	0.01	
UCLA, Mean (SD)	Low	4.6 (1.5)	4.4 (1.3)	ns
	High	4.9 (2.2)	4.7 (1.4)	ns
	p value	ns	ns	
ROM, Mean (SD)	Low	96.4 (18.3)	95.8 (15.1)	ns
	High	96.6 (21.7)	94.6 (13.6)	ns
	p value	ns	ns	

AKSS, American Knee Society Score; BiUKA, biunicompartmental knee arthroplasty; EQ-5D-3L, EuroQol five-dimension three-level questionnaire; FJS, Forgotten Joint Score; ns, not specified; OKS, Oxford Knee Score; ROM, range of motion; SD, standard deviation; TKA, total knee arthroplasty; VAS, visual analogue scale.

Table v. University of California, Los Angeles Activity Score three months postoperatively. < 4 low activity, ≥ 4 high activity.

		TKA	BiUKA	p-value
n	High Activity	17	15	ns
	Low Activity	24	19	
AKSS	High Activity	103.3 (24.2)	95.5 (22.9)	ns
	Low Activity	94.0 (35.9)	87.7 (38.1)	ns
	p value	ns	ns	
FJS	High Activity	18.5 (10.0)	18.7 (12.8)	ns
	Low Activity	12.8 (9.6)	14.4 (12.8)	ns
	p value	ns	ns	
OKS	High Activity	37.0 (7.6)	33.4 (9.9)	ns
	Low Activity	31.2 (10.7)	31.1 (10.8)	ns
	p value	ns	ns	
Pain VAS	High Activity	1.4 (0.9)	2.0 (2.2)	ns
	Low Activity	2.6 (2.4)	2.6 (2.4)	ns
	p value	ns	ns	
Stiffness VAS	High Activity	2.5 (2.2)	3.0 (2.0)	ns
	Low Activity	3.7 (2.5)	3.1 (2.3)	ns
	p value	ns	ns	
EQ-5D-3L, Mean (SD)	High Activity	0.8 (0.8)	0.7 (0.3)	ns
	Low Activity	0.6 (0.3)	0.6 (0.2)	ns
	p value	ns	ns	
EQ-5D-VAS, Mean (SD)	High Activity	87.8 (6.9)	78.3 (26.8)	ns
	Low Activity	78.9 (14.5)	77.7 (16.4)	ns
	p value	ns	ns	
ROM	High Activity	103.9 (11.1)	97.4 (13.9)	ns
	Low Activity	90.7 (23.3)	93.2 (14.5)	ns
	p value	ns	ns	

AKSS, American Knee Society Score; BiUKA, biunicompartmental knee arthroplasty; EQ-5D-3L, EuroQol five-dimension three-level questionnaire; FJS, Forgotten Joint Score; ns, not specified; OKS, Oxford Knee Score; ROM, range of motion; SD, standard deviation; TKA, total knee arthroplasty; VAS, visual analogue scale.

Table vi. HAD Anxiety score one year postoperatively. < 8 low anxiety, > 8 high anxiety.

		TKA	BiUKA	p-value
n	Low Anxiety	29	23	ns
	High Anxiety	12	9	
AKSS, Mean (SD)	Low Anxiety	163.4 (39.0)	155.5 (27.5)	ns
	High Anxiety	142.8 (26.9)	121.6 (37.1)	ns
	p value	ns	0.020	
FJS, Mean (SD)	Low Anxiety	23.4 (11.68)	23.6 (11.64)	ns
	High Anxiety	9.6 (11.6)	15.86 (14.19)	ns
	p value	0.001	ns	
OKS, Mean (SD)	Low Anxiety	39.7 (7.6)	39.5 (7.2)	ns
	High Anxiety	27.8 (9.0)	30.43 (11.1)	ns
	p value	0.001	0.010	
Pain VAS, Mean (SD)	Low Anxiety	1.4 (1.3)	1.5 (2.1)	ns
	High Anxiety	2.8 (2.6)	1.8 (2.0)	ns
	p value	ns	ns	
Stiffness VAS, Mean (SD)	Low Anxiety	1.9 (1.9)	2.0 (2.2)	ns
	High Anxiety	3.5 (2.7)	2.7 (3.0)	ns
	p value	ns	ns	
EQ-5D- VAS, Mean (SD)	Low Anxiety	82.0 (15.0)	82.0 (14.6)	ns
	High Anxiety	71.5 (15.8)	61.5 (29.1)	ns
	p value	ns	0.006	
EQ-5D-3L, Mean (SD)	Low Anxiety	0.8 (0.2)	0.8 (0.2)	ns
	High Anxiety	0.6 (0.2)	0.5 (0.4)	ns
	p value	ns	ns	
UCLA, Mean (SD)	Low Anxiety	5.3 (1.7)	5.6 (1.8)	ns
	High Anxiety	4.5 (2.0)	4.5 (1.2)	ns
	p value	ns	ns	
ROM, Mean (SD)	Low Anxiety	109.0 (9.8)	110.2 (11.6)	ns
	High Anxiety	114.3 (8.1)	97.0 (14.0)	0.001
	p value	ns	0.006	

AKSS, American Knee Society Score; BiUKA, biunicompartmental knee arthroplasty; EQ-5D-3L, EuroQol five-dimension three-level questionnaire; FJS, Forgotten Joint Score; ns, not specified; OKS, Oxford Knee Score; ROM, range of motion; SD, standard deviation; TKA, total knee arthroplasty; VAS, visual analogue scale.

Table vii. HAD Depressed score one year postoperatively. < 8 low anxiety, > 8 high anxiety.

		TKA	BiUKA	p-value
n	Not Depressed	27	21	ns
	Depressed	14	11	
AKSS, Mean (SD)	Not Depressed	163.0 (37.6)	154.9 (28.1)	ns
	Depressed	145.3 (32.8)	133.0 (37.9)	ns
	p value	ns	ns	
FJS, Mean (SD)	Not Depressed	22.6 (11.7)	24.5 (10.7)	ns
	Depressed	12.3 (10.6)	17.4 (15.0)	ns
	p value	0.012	ns	
OKS, Mean (SD)	Not Depressed	39.6 (7.2)	39.0 (7.3)	ns
	Depressed	29.6 (10.8)	34.2 (11.8)	ns
	p value	0.001	ns	
Pain VAS, Mean (SD)	Not Depressed	1.5 (1.5)	1.2 (1.4)	ns
	Depressed	2.5 (2.4)	2.4 (2.8)	ns
	p value	ns	ns	
Stiffness VAS, Mean (SD)	Not Depressed	2.1 (2.2)	1.8 (2.0)	ns
	Depressed	2.8 (2.5)	2.7 (3.0)	ns
	p value	ns	ns	
EQ-5D-VAS, Mean (SD)	Not Depressed	82.5 (14.9)	78.3 (21.9)	ns
	Depressed	71.3 (15.5)	75.1 (17.9)	ns
	p value	ns	ns	
EQ-5D-3L, Mean (SD)	Not Depressed	0.81 (0.2)	0.78 (0.26)	ns
	Depressed	0.66 (0.23)	0.70 (0.4)	ns
	p value	ns	ns	
UCLA, Mean (SD)	Not Depressed	5.5 (1.6)	5.8 (1.9)	ns
	Depressed	4.2 (2.0)	4.7 (1.3)	ns
	p value	ns	ns	
ROM, Mean (SD)	Not Depressed	110.0 (10.2)	109.1 (12.5)	ns
	Depressed	111.9 (8.5)	103.0 (14.5)	ns
	p value	ns	ns	

AKSS, American Knee Society Score; BiUKA, biunicompartmental knee arthroplasty; EQ-5D-3L, EuroQol five-dimension three-level questionnaire; FJS, Forgotten Joint Score; ns, not specified; OKS, Oxford Knee Score; ROM, range of motion; SD, standard deviation; TKA, total knee arthroplasty; VAS, visual analogue scale.

Table viii. BMI one year postoperatively. < 35 low BMI, > 35 high BMI.

		TKA	BiUKA	p-value
n	High BMI	11	8	ns
	Low BMI	31	26	
AKSS, Mean (SD)	High BMI	159.7 (35.5)	119.3 (31.0)	0.020
	Low BMI	157.7 (37.8)	152.2 (31.0)	ns
	p value	ns	0.020	
FJS, Mean (SD)	High BMI	19.2 (12.3)	22.0 (11.9)	ns
	Low BMI	19.7 (12.5)	20.8 (12.7)	ns
	p value	ns	ns	
OKS, Mean (SD)	High BMI	35.3 (10.2)	34.4 (9.9)	ns
	Low BMI	36.8 (9.6)	37.4 (9.0)	ns
	p value	ns	ns	
Pain VAS, Mean (SD)	High BMI	1.8 (2.4)	1.7 (2.2)	ns
	Low BMI	1.8 (1.7)	1.1 (0.8)	ns
	p value	ns	ns	
Stiffness VAS, Mean (SD)	High BMI	2.4 (2.4)	2.2 (2.6)	ns
	Low BMI	2.3 (2.3)	2.0 (2.3)	ns
	p value	ns	ns	
EQ-5D-VAS, Mean (SD)	High BMI	71.8 (21.6)	58.1 (31.7)	ns
	Low BMI	81.3 (12.7)	79.6 (16.9)	ns
	p value	ns	0.006	
EQ-5D-3L, Mean (SD)	High BMI	0.6 (0.3)	0.6 (0.4)	ns
	Low BMI	0.7 (0.1)	0.7 (0.2)	ns
	p value	ns	ns	
UCLA, Mean (SD)	High BMI	5.3 (2.2)	4.7 (1.3)	ns
	Low BMI	5.0 (1.7)	5.4 (1.9)	ns
	p value	ns	ns	
ROM, Mean (SD)	High BMI	113.9 (9.7)	102.3 (10.7)	0.030
	Low BMI	109.6 (9.2)	108.5 (13.3)	ns
	p value	ns	ns	

AKSS, American Knee Society Score; BiUKA, biunicompartmental knee arthroplasty; EQ-5D-3L, EuroQol five-dimension three-level questionnaire; FJS, Forgotten Joint Score; ns, not specified; OKS, Oxford Knee Score; ROM, range of motion; SD, standard deviation; TKA, total knee arthroplasty; VAS, visual analogue scale.

Table ix. Trochlea Outerbridge grade one year postoperatively. Low = 0, 1, and 2, high = 3 and 4.

		TKA	BiUKA	p-value
n	Low	20	17	ns
	High	21	17	
AKSS, Mean (SD)	Low	151.3 (39.1)	143.1 (36.2)	ns
	High	167.5 (32.3)	147.2 (31.3)	ns
	p value	ns	ns	
FJS, Mean (SD)	Low	18.8 (12.4)	22.0 (12.3)	ns
	High	20.1 (12.8)	20.0 (12.8)	ns
	p value	ns	ns	
OKS, Mean (SD)	Low	37.2 (9.5)	36.3 (9.5)	ns
	High	36.1 (10.1)	37.2 (9.0)	ns
	p value	ns	ns	
Pain VAS, Mean (SD)	Low	1.7 (1.4)	1.3 (1.6)	ns
	High	1.8 (2.2)	1.8 (2.3)	ns
	p value	ns	ns	
Stiffness VAS, Mean (SD)	Low	2.5 (2.3)	2.1 (2.6)	ns
	High	2.1 (2.3)	2.0 (2.0)	ns
	p value	ns	ns	
EQ-5D-VAS, Mean (SD)	Low	80.7 (14.2)	70.7 (26.0)	ns
	High	77.2 (17.5)	79.8 (16.8)	ns
	p value	ns	ns	
EQ-5D-3L, Mean (SD)	Low	0.7 (0.1)	0.7 (0.3)	ns
	High	0.7 (0.2)	0.7 (0.3)	ns
	p value	ns	ns	
UCLA, Mean (SD)	Low	4.7 (1.5)	5.3 (1.7)	ns
	High	5.3 (2.0)	5.3 (2.0)	ns
	p value	ns	ns	
ROM, Mean (SD)	Low	106.3 (10.1)	105.4 (14.8)	ns
	High	115.1 (6.6)	108.8 (10.6)	ns
	p value	0.010	ns	

AKSS, American Knee Society Score; BiUKA, biunicompartmental knee arthroplasty; EQ-5D-3L, EuroQol five-dimension three-level questionnaire; FJS, Forgotten Joint Score; ns, not specified; OKS, Oxford Knee Score; ROM, range of motion; SD, standard deviation; TKA, total knee arthroplasty; VAS, visual analogue scale.

Table x. University of California, Los Angeles Activity Score one year postoperatively. < 4 low activity, ≥ 4 high activity.

		TKA	BiUKA	p-value
n	High Activity	17	15	ns
	Low Activity	24	19	
AKSS, Mean (SD)	High Activity	112.8 (28.8)	107.6 (21.4)	ns
	Low Activity	105.4 (31.1)	88.2 (30.2)	ns
	p value	ns	ns	
FJS, Mean (SD)	High Activity	21.3 (12.2)	24.8 (11.0)	ns
	Low Activity	17.6 (12.2)	17.8 (12.9)	ns
	p value	ns	ns	
OKS, Mean (SD)	High Activity	39.6 (7.7)	40.2 (6.8)	ns
	Low Activity	34.0 (10.4)	33.7 (10.1)	ns
	p value	ns	ns	
Pain VAS, Mean (SD)	High Activity	1.9 (1.8)	0.9 (0.5)	ns
	Low Activity	1.8 (2.0)	2.1 (2.6)	ns
	p value	ns	ns	
Stiffness VAS, Mean (SD)	High Activity	2.2 (2.0)	1.3 (1.1)	ns
	Low Activity	2.5 (2.5)	2.7 (2.9)	ns
	p value	ns	ns	
EQ-5D-VAS, Mean (SD)	High Activity	80.6 (16.4)	82.4 (14.8)	ns
	Low Activity	77.5 (15.6)	68.4 (26.1)	ns
	p value	ns	0.03	
EQ-5D-3L, Mean (SD)	High Activity	0.8 (0.1)	0.8 (0.2)	ns
	Low Activity	0.7 (0.2)	0.6 (0.3)	ns
	p value	ns	ns	
ROM, Mean (SD)	High Activity	113.3 (7.1)	110.8 (11.1)	ns
	Low Activity	108.8 (10.7)	104.0 (13.8)	ns
	p value	ns	ns	

AKSS, American Knee Society Score; BiUKA, biunicompartmental knee arthroplasty; EQ-5D-3L, EuroQol five-dimension three-level questionnaire; FJS, Forgotten Joint Score; ns, not specified; OKS, Oxford Knee Score; ROM, range of motion; SD, standard deviation; TKA, total knee arthroplasty; VAS, visual analogue scale.