

Hindfoot alignment at one year after total knee arthroplasty

Takashi Takenaka¹ · Kazuya Ikoma¹ · Suzuyo Ohashi¹ · Yuji Arai¹ · Yusuke Hara¹ · Keiichiro Ueshima¹ · Koushiro Sawada¹ · Toshiharu Shirai¹ · Hiroyoshi Fujiwara¹ · Toshikazu Kubo¹

Table 1 Patients' characteristics

	Valgus group (<i>n</i> = 51)	Varus group (<i>n</i> = 22)	<i>p</i> value
Age (year)	74.7 ± 6.7	75.0 ± 5.5	
Sex			
	Male: 8	Male: 7	
	Female: 43	Female: 15	
FTA			
Pre-op	185.5 ± 4.5°	183.0 ± 5.1°	0.04
Post-op	173.9 ± 2.8°	174.0 ± 2.7°	n.s.

FTA femorotibial angle

PS型



76度未満 : 後足部内反
76度以上 : 後足部外反

Fig. 1 Hindfoot radiograph image. *Line a* indicates the long axis of the tibia. *Point b* indicates the lateral extremity of the calcaneus at the posterior surface of the talocalcaneal joint. *Point c* indicates the superior margin of the sustentaculum tali. *Angle d* is the varus–valgus angle

Table 3 Varus–valgus angle before, 3 weeks after, and 1 year after total knee arthroplasty

	VVA (°)		
	Prior to TKA	3 weeks following TKA	1 year following TKA
Hindfoot valgus group	80.5 ± 3.1	78.6 ± 3.7**	77.1 ± 2.7*
Hindfoot varus group	72.7 ± 2.6	72.3 ± 3.3 ^{n.s.}	73.5 ± 3.0 ^{n.s.}

Data are presented as mean ± SD

Chronological changes in the VVA were investigated using repeated analysis of variance with Tukey's post hoc test

TKA total knee arthroplasty, VVA varus–valgus angle, *n.s.* not significant

* $p < 0.05$; ** $p < 0.01$

反復測定の一元配置分散分析 (Tukey法)

結論

後足部外反変形の症例は、膝のアライメントに対して後足部を代償できる能力を有していると考えられる。一方、後足部内反変形の症例は、膝のアライメントに対して後足部を適応させる能力が欠如していると思われるので、外来での足部の痛みに注意する必要がある。