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[ ]

:

·

· 2 가 31, 32

· 5 2 19.1 Kg

·

90

molding , molding

· 3

1, 2, 3, 6

·

· 1.1 cm 1.5 cm

4 mm 가 . 9 (28.1%)

·

5 3 5 가 (p=0.15),

(percentile) 65 percentile 42 percentile

(p=0.01).

:

·

가

·

:

---

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(severe) , 2  
가 31 , 32  
2 7 10  
5 2 가 18 , 가 13  
32 (24~60)  
10 8 2.8  
3  
16 , (moderate)  
2~3 가  
12.3 Kg  
28.2 Kg 19.1 Kg  
15 , 15 , 가 1  
(Fig. 1~3) 가 16  
가 , 9 , 5 ,  
1  
4  
2 , 2 ,  
1 , 1 .  
1995 1999  
74 , 77  
38 , 40  
3  
6



**Fig. 1.** 5 year-old male, preoperative AP radiographs showing the bilateral femoral shaft fractures



**Fig. 2.** After cast removal, postoperative 6 weeks AP radiographs showing the complete bony union of femoral shaft fractures



**Fig. 3.** Postoperative 2 years long bone AP radiographs showing the no leg length discrepancy



**Fig. 5.** A valgus mold was placed at the fracture site and meticulous molding on popliteal fossa



**Fig. 4.** A short leg cast was placed first with the ankle in neutral on injured limb

paired sample T-test    time repeated ANOVA  
test  
2.

(Fig. 4)

가 ,

가  
90  
30  
가  
molding  
molding (Fig. 5).  
가  
trimming  
0.5~1.5 cm,  
20 10 10  
5  
74.9 (57~106)  
37.6 (25~70)



**Fig. 6A, B.** 2.5 year-old female, preoperative A-P radiographs showing the femoral fracture and immediate postoperative Lat.radiographs showing the acceptable reduction



**Fig. 7.** Postoperative 3 days, unacceptable shortening had happened in the cast so first corrective cast wedging was done. Lateral radiographs showing the acceptable reduction after cast wedging.



**Fig. 8.**



**Fig. 9.**

**Fig. 8, 9.** Postoperative 2 weeks, lateral radiographs showing the unacceptable angulation in the cast (Fig. 8) so second corrective cast wedging was done, afterthen reduction was maintained (Fig. 9)

		(p<0.001).	
44.7	(35~53)	2.	
5.8	(4~11)		
1.	가		7.5
		(4~10)	2.5 (0~7) 5
	1.1 cm	가	
(0.8~1.4)	1.5 cm (1.2~1.9)	11.1 (3~20)	6.7 (1~11) 4.4
4 mm	가	가	
	2 mm		
(-0.7~0.8)			

**Table 1.** Corrective cast wedging

From casting	3 days	1 week	2 weeks
Case 1	*	*	*
Case 2	**		
Case 3	*	*	
Case 4	*		
Case 5		*	
Case 6	*		
Case 7	*		
Case 8			*
Case 9	*	*	
Correction Number	8	4	2

(p=0.014). 7.9±6.7  
, 7.0±5.6  
(p=0.134).  
  
1,6,8,9,12,14,16),  
  
6,10).  
Infante Jr. 7) 6  
, 2~3 cm

3. (Corrective cast wedging)  
9 , 9 (28.1%) 1.0~1.5 cm  
. 5 (remodeling)  
, 3 , 1 1 cm  
(Table 1). 1,2).  
6 ,  
2 , 가 40% .  
1 (Fig. 6~9).  
가 , .  
3,11).  
가 5 3 5  
가 가 가  
(p=0.15), (percentile) 65 percentile 42 9). 1.1  
percentile cm 1.5 cm 4 mm  
(p=0.01). 가  
4. 2 mm  
가 .  
51.9±2 가  
60±7.9  
가 (p<0.001).  
53.5±7.1 , 50±5.8

2~3 가 가 가 25 가 90 90 (iliotibial band) 가 12) (periosteal sleeve) (rotational alignment) 6 8) 20 , 20 1,12) 9,12) 5 17) 1,6,12,16) (sticky) 가 18) David 5) (rotational malunion)

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**Abstract****Treatment of the Children's Femur Shaft Fracture by Early Spica Cast**

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**Purpose:** To investigate the proper indication, technical point and complication of the early hip spica cast.

**Materials and Methods:** Thirty-one children with thirty-two fractures more than 2-year follow up were included. The patient's average age and weight were 5 year 2 months and 19.1 Kg respectively. Spica cast was applied as follow. First short leg cast was applied, and then patient was placed on the spica cast table. During the cast incorporation, the hip and knee flexed sufficiently to maintain length and alignment of the fracture, and popliteal fossa was well molded and padded. The meticulous valgus molding of the fracture site was also needed.

**Results:** Average bayonet overriding of the fracture was initially 1.1 cm, however it increased to 1.5 cm during cast immobilization. In the 9 patients (28.1%), cast wedging correction were needed to 3 to 14 days after initial cast immobilization and the cause of correction was related to patients weight. At the final follow up, there was no serious functional or cosmetic complications.

**Conclusion:** For the successful treatment, the proper patients selection, meticulous cast application and careful radiographic assessment after cast application were needed.

**Key Words:** Femur, Pediatric fracture, Early hip spica cast

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