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Title: Clinical Comparison and Survival Rate Between Unicompartamental Knee Arthroplasty and High Tibial Osteotomy With An External Fixator For Varus Knee In Patients Younger Than 60 Years at Mid-Term Follow-Up

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Disclosures: None



Introduction

- Isolated medial compartment OA common, 85 % OA knee
- Mechanical axis medial compartment, Varus deformity
- Surgical treatment- HTO, UKA
- HTO –Correct alignment and metaphyseal varus deformity
- UKA- Correct Intraarticular deformity due to cartilage damage
- UKA- Flexion deformity $<10^{\circ}$ & Varus deformity $<15^{\circ}$, low functional level
- C/I of both- Opposite compartment, Inflammatory arthritis, Flexion deformity $>15^{\circ}$



Material & Methods

- Evaluate and compare the functional outcomes and survival rates of UKA and HTO with an external fixator for medial compartment OA
- Inclusion- <60 years with anteromedial OA operated with cemented UKA or HTO
- Exclusion- Lack of data, revision surgery, varus/valgus instability, flexion <90°, flexion deformity >10°, Varus >15°, follow up <60 months, Previous surgical procedure to knee except arthroscopy
- UKA performed in specialized tertiary hospital Italy
- HTO India tertiary care hospital



- Evaluated for OKS,KOOS,IKDC
- Clinical evaluation day of surgery and follow up visit (minimum 60 months)
- Mean & SD
- T-test and Wilcoxon Mann Whitney test-Continuous variable
- Chi-square test analyze categorical variable



Result

Variables	HTO	UKA	p-value
N	60	197	
Age (Mean $\pm$ SD)	47.78 $\pm$ 8.01	55.88 $\pm$ 2.28	< 0.001*
Sex, n (%)			
Female	40 (66.7)	118 (59.9)	0.429
Male	20 (33.3)	79 (40.1)	
Side, n (%)			
Left	37 (61.7)	94 (47.7)	0.081
Right	23 (38.3)	103 (52.3)	
Pre-operative scores			
Oxford Knee Score	22.53 $\pm$ 6.45	22.77 $\pm$ 2.62	0.124
KOOS	45.67 $\pm$ 14.05	46.93 $\pm$ 13.91	0.392
IKDC score	36.80 $\pm$ 15.24	37.22 $\pm$ 15.67	0.982



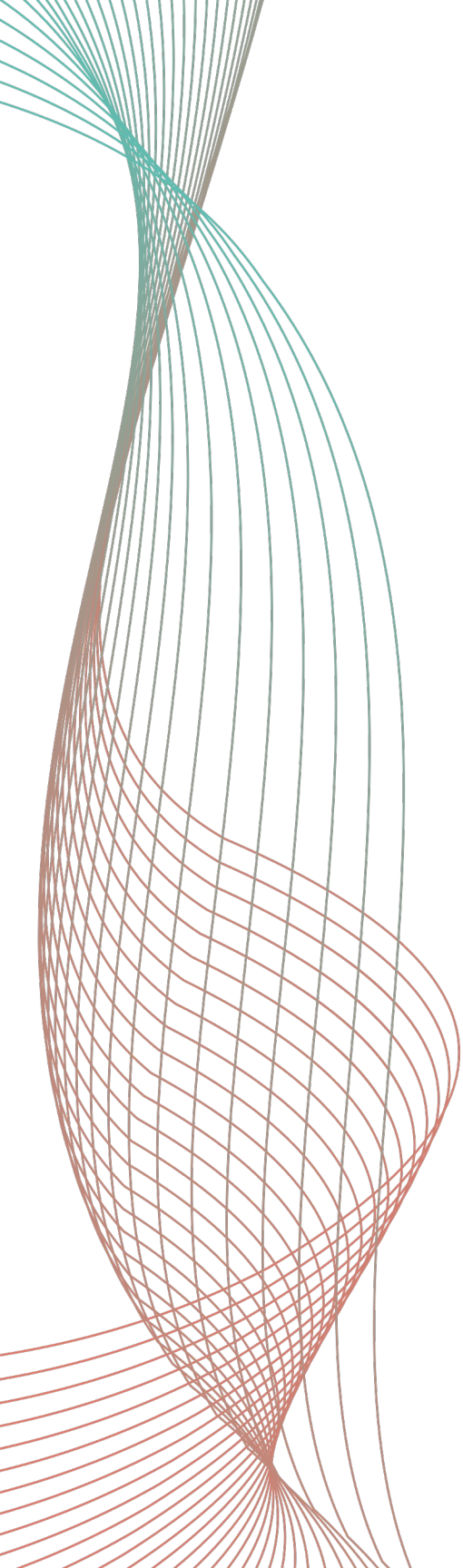
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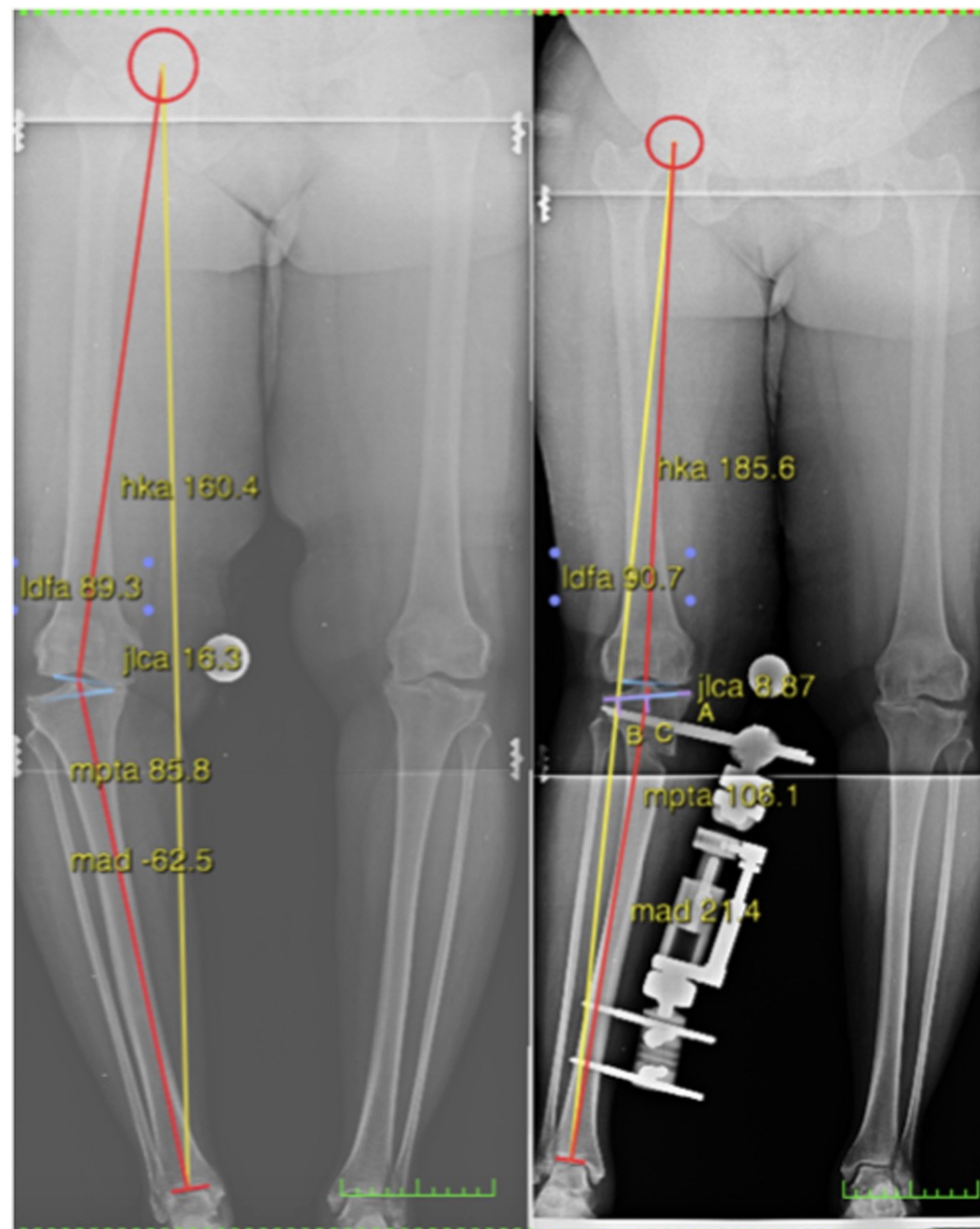
Table 2. Clinical outcomes					
Variables	HTO (N = 60)	UKA (N = 197)	Group comparison	Time comparison (p-value)	
	Mean ± SD	Mean ± SD	p-value	HTO	UKA
Oxford Knee Score					
T ₀	22.53 ± 6.45	22.77 ± 2.62	0.124	< 0.001*	< 0.001*
T ₁	41.20 ± 3.71	44.66 ± 1.93	< 0.001*		
KOOS					
T ₀	45.67 ± 14.05	46.93 ± 13.91	0.392	< 0.001*	< 0.001*
T ₁	83.21 ± 7.85	82.23 ± 7.51	0.195		
IKDC score					
T ₀	36.80 ± 15.24	37.22 ± 15.67	0.982	< 0.001*	< 0.001*
T ₁	66.48 ± 11.76	69.76 ± 10.57	0.044*		





Parameters	HTO (N = 60)	UKA(N = 197)	p-value
	n (%)	n (%)	
Number of complications	3 (5.0)	4 (2.0)	0.208
Complications			
Aseptic mobilisation	0 (0.0)	3/4 (0.7)	0.143
Infection, any	3/3 (100)	1/4 (0.3)	0.143
Superficial infection	2/3 (0.7)	0 (0.0)	-
Deep infection	1/3 (0.3)	1/4 (0.0)	-





Conclusion

- In young patients (<60 years) with an isolated medial knee (OA), both HTO and UKA led to good to excellent clinical results with a low rate of complications at mid-term follow-up; both surgical procedures may be considered in this patient population.



References

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