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*Mid-term outcome analysis
between Isolated HTO V/S HTO
combined with Arthroscopy in
medial compartment OA knee –
A comparative study.*

*Dr. Arun.G.R, Associate Professor,
India*



Faculty Disclosure Information

- Nothing to disclose



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Introduction

- Medial compartmental knee osteoarthritis is a common problem that causes significant pain and disability in younger adults.
- After failed conservative management, surgical treatment includes arthroscopic debridement, corrective osteotomies and Uni-condylar knee replacement.
- High tibial osteotomy (HTO) is a knee preserving surgery which helps by correcting the mechanical axis of the lower limb.

Introduction

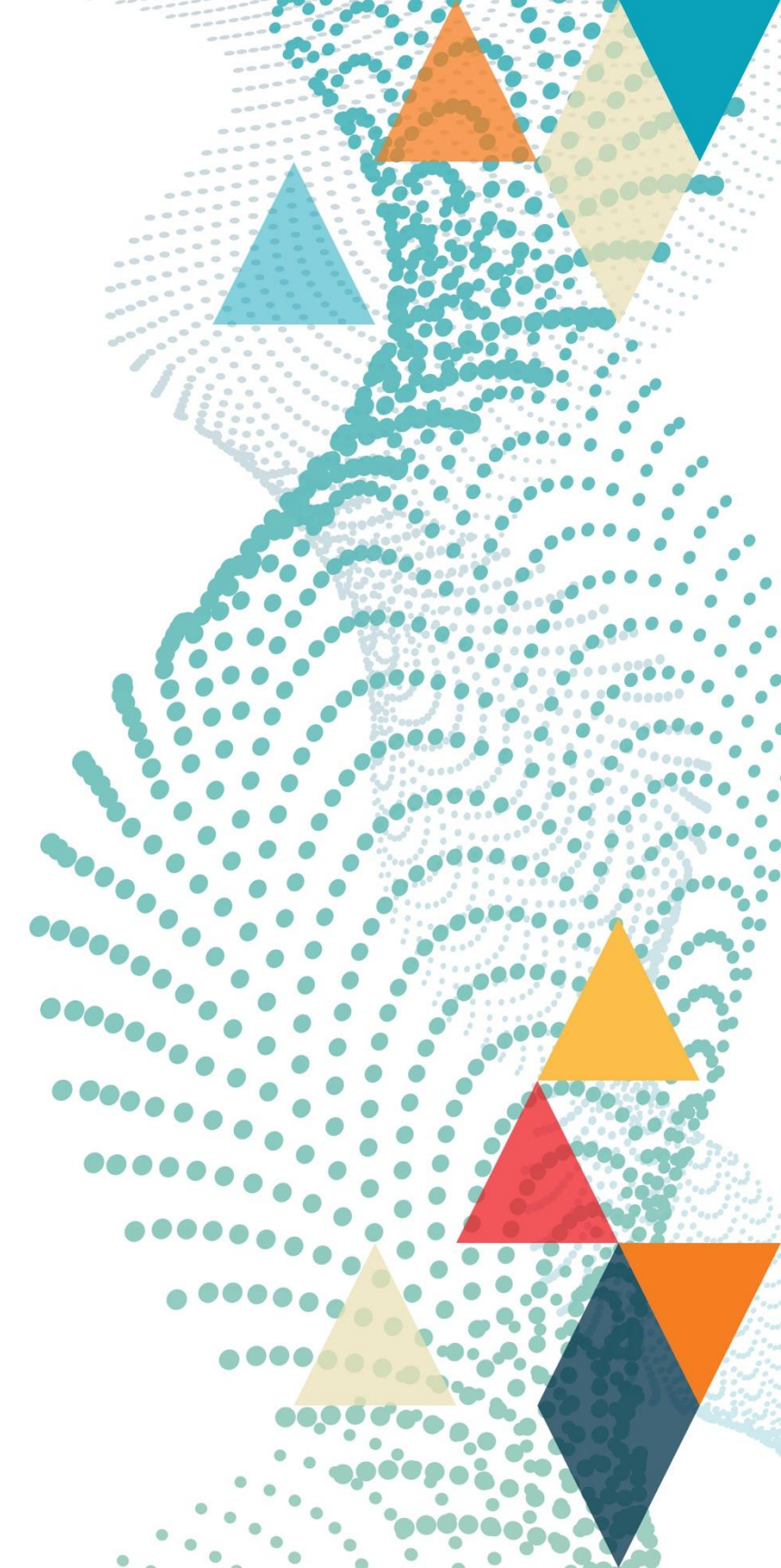
- The purpose of surgical management is to reduce pain, give good function and delay total knee replacement.
- Combining arthroscopic surgery with HTO will help to address concurrent intra-articular pathology.
- This study aimed to compare advantages of arthroscopy, improvement in functional scores and radiographic parameters between patients undergoing HTO alone and HTO with arthroscopy.



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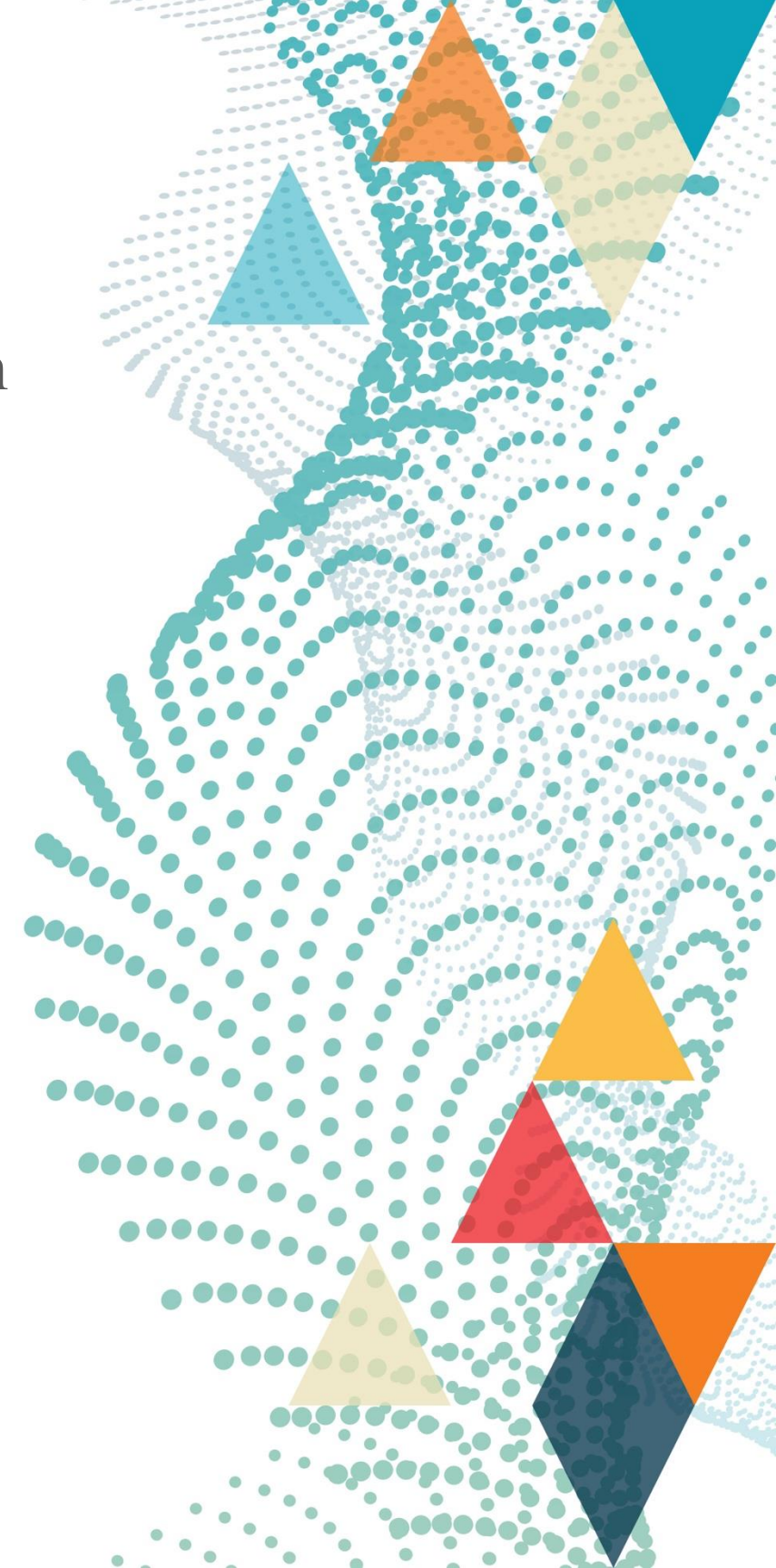


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Materials and Methods

- Eighty patients with medial compartment knee osteoarthritis between 30 years to 55 years were randomly assigned to two groups: Group I (n=40) underwent HTO alone and Group II (n=40) underwent HTO with arthroscopic surgery over 4 years.
- Arthroscopy treatment included procedures like partial meniscectomy, medial meniscus root repairs, loose body removal, plica excision, synovectomy, microfractures and abrasion arthroplasty.



Materials and Methods

- Radiographic evaluations were performed by an independent observer preoperatively, at 6 months and 12-month postoperatively using full-length Xray scannogram of the lower limbs assessing MPTA, JLCA, HKA angle, and WBL ratio.
- Functional assessment was done preoperatively, at 6 months and 12 months respectively using WOMAC & VAS scores.

* MPTA – Medial Proximal Tibial Angle

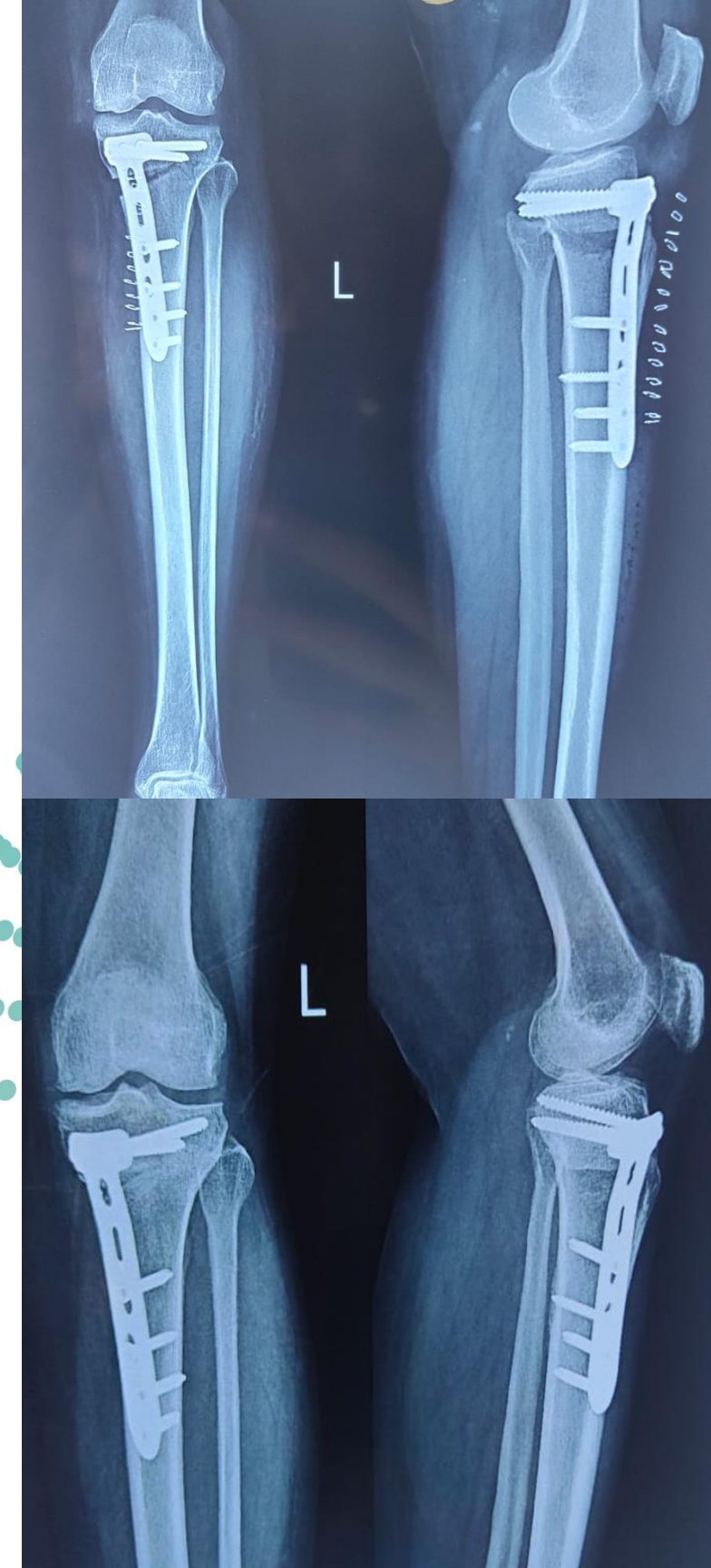
* HKA – Hip Knee Ankle angle

* WOMAC – Western Ontario McMaster Universities Osteoarthritis Index

* JLCA- Joint Line Convergence Angle

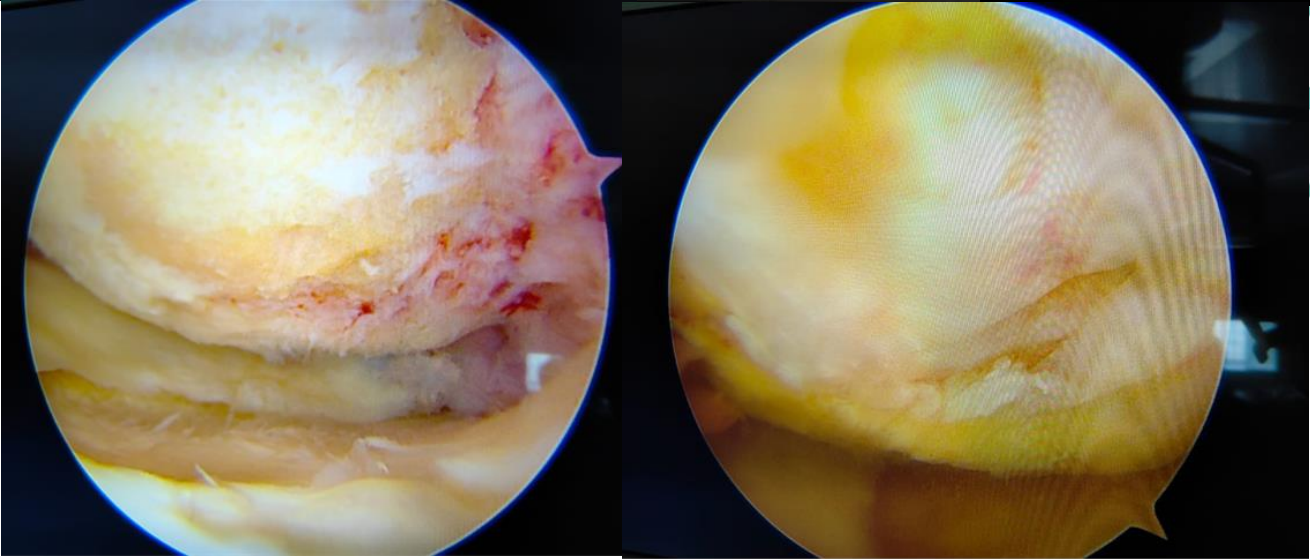
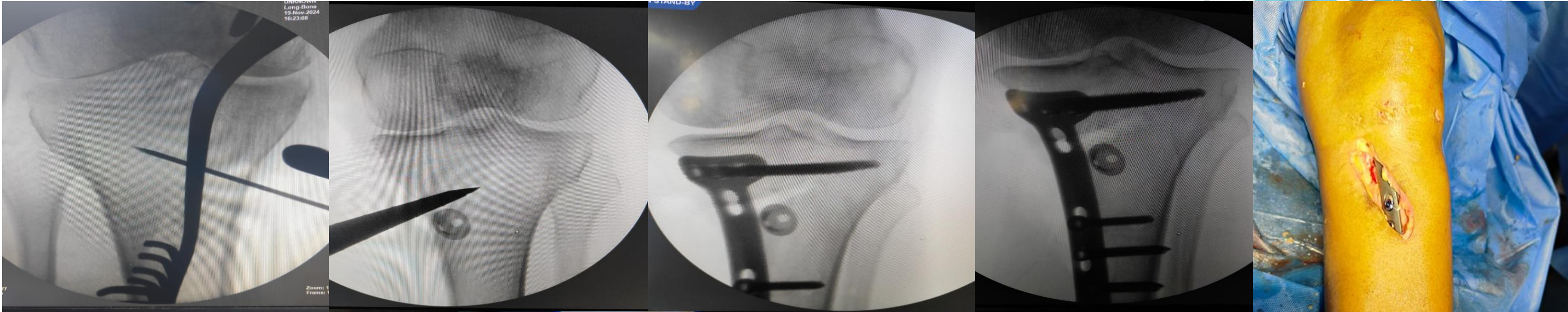
* WBL – Weight Bearing Line

* VAS – Visual Analog Scale



Materials and Methods

Operative procedure



Arthroscopic Findings

Results

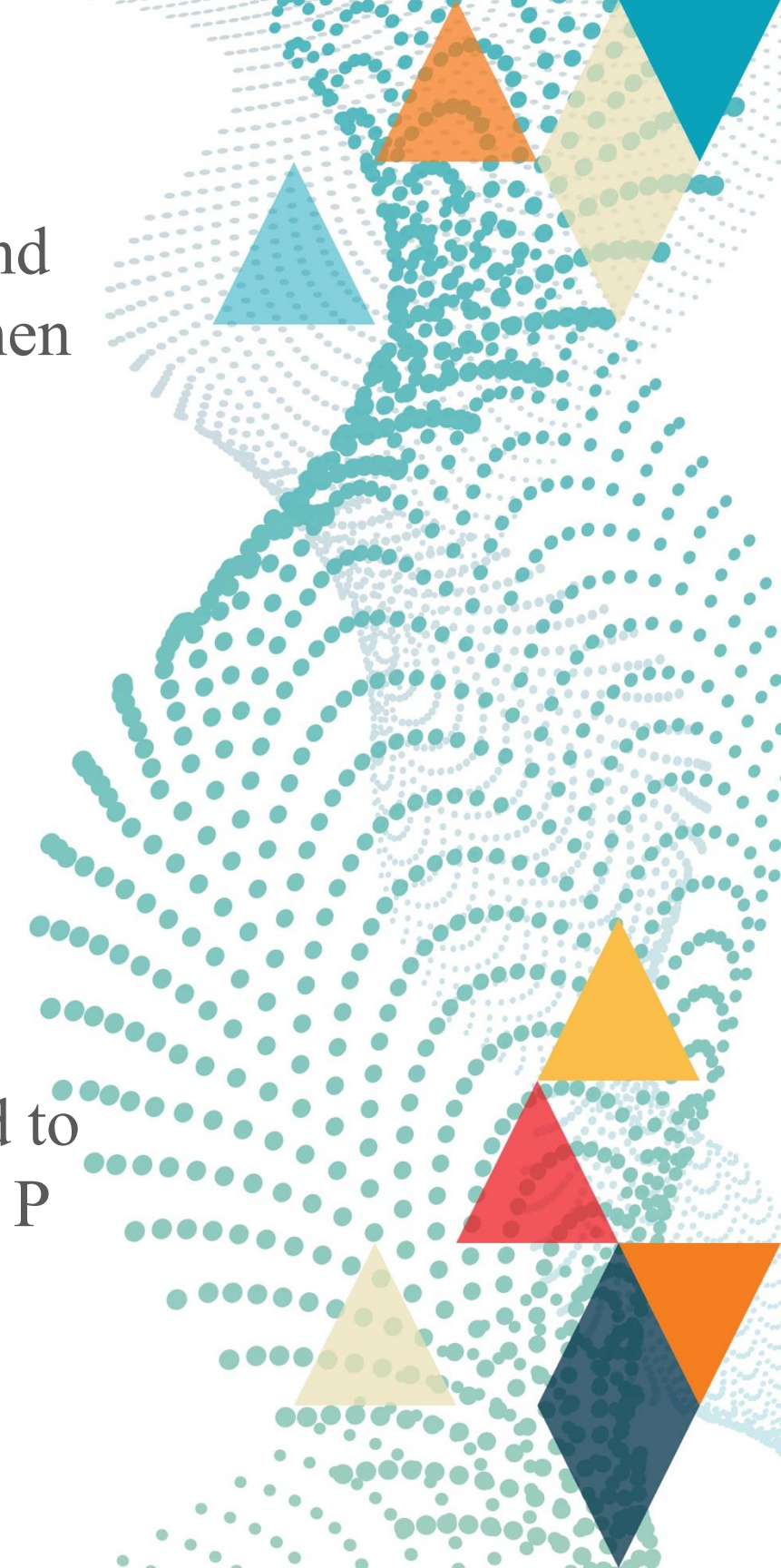
- Postoperative MPTA increased, JLCA decreased, HKA increased, and WBL% increased in both groups and was statistically significant when compared with the preoperative parameters.
- However, these parameters did not show statistically significant differences between the two groups (P values= 0.40, 0.823, 0.928, 0.871, respectively).
- Statistically significant improvements were observed at 6 months postoperatively in WOMAC and VAS scores in the HTO with arthroscopy group (WOMAC: 17.5 ± 8.47 , VAS: 2.2 ± 0.59) compared to the HTO alone group (WOMAC: 28.95 ± 18.8 , VAS: 3.9 ± 0.52), with P values < 0.001 .



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Results

- Despite these early improvements at 6 months post operative period, functional scores did not show statistical significance at 12 months period. (WOMAC: $P=0.36$, VAS: $P=0.22$).
- Both groups demonstrated comparable long-term outcomes, indicating that the early benefits of arthroscopy did not persist significantly beyond the 6-month mark.



- 6 month follow up

Results

	<i>HTO group</i>	<i>HTO+A Group</i>	<i>p value</i>
<i>Total Patients</i>	40	40	
<i>Age (Mean)</i>	54.3	55.2	0.34
<i>Male</i>	12	14	
<i>Female</i>	28	26	
<i>Right side</i>	22	25	
<i>Left side</i>	18	15	
<i>MPTA</i>	96.1 \pm 3.4	96.2 \pm 4.1	0.40
<i>JLCA</i>	1.4 \pm 0.3	1.2 \pm 0.5	0.823
<i>HKA</i>	1.1 \pm 0.3	1.2 \pm 0.25	0.928
<i>WBL%</i>	64.3 \pm 2.4	65.7 \pm 2.6	0.871
<i>WOMAC</i>	16.95 \pm 8.3	15.4 \pm 6.5	0.36
<i>VAS</i>	2.0 \pm 0.52	1.8 \pm 0.59	0.22

Conclusion:

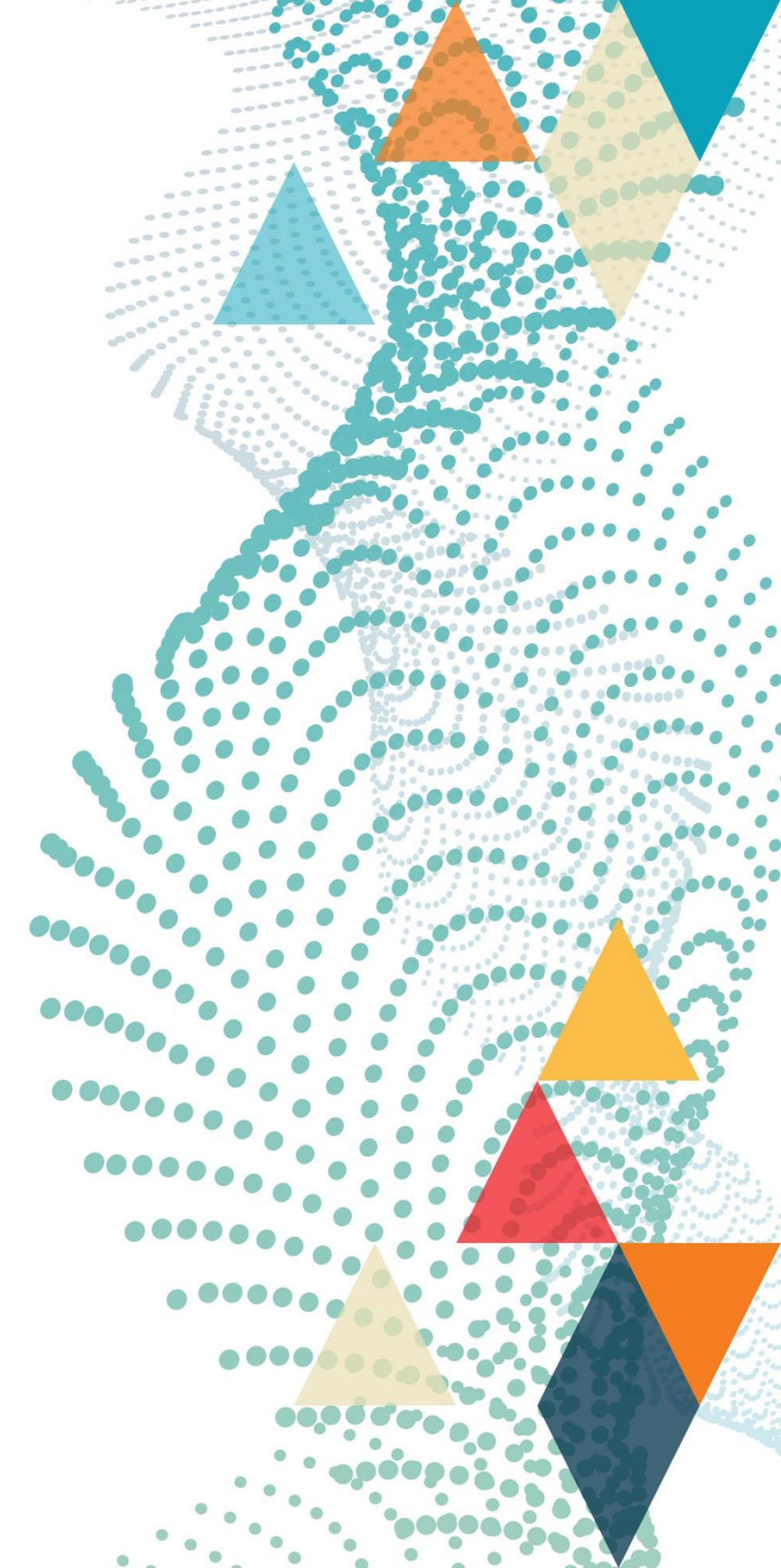
- Concurrent arthroscopic surgery with HTO though showed significant reduction in WOMAC and VAS score in early post operative period later did not show any significant difference from the isolated HTO group after 6 months.
- So, we can conclude that doing additional arthroscopic procedure may help in addressing intraarticular pathologies but did not have any significant clinical benefits as compared to alignment correction done with HTO in mid term time period.



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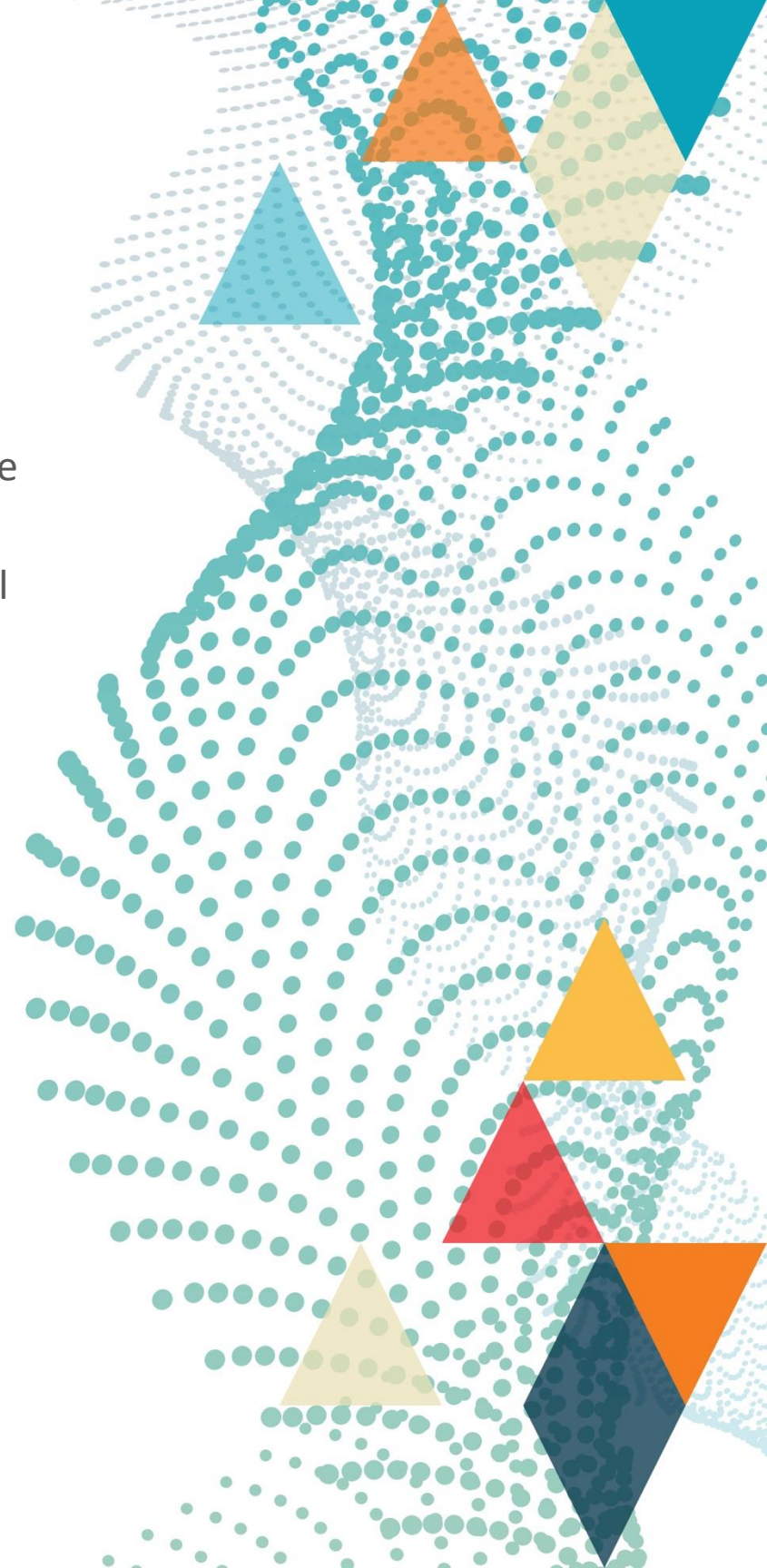
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