



D Y PATIL
HOSPITAL

NAVI MUMBAI

Short term outcome of Varus derotation osteotomy for Perthes disease

Dr Faizan Vaja(3rd y.pg), Dr Sunil Shetty(prof), Dr Amit Dhond(prof),Dr Mainak Gupta(3rd y.pg)

DR.D.Y.Patil hospital and research institute



Introduction

Legg-calve perthes disease is an idiopathic self limiting condition characterized by avascular necrosis of femoral capital epiphysis affecting children age group of 4 to 12 years

8 year old male child had presented with left sided hip pain with limp since 5 months

Clinically limb length discrepancy as left sided shortening of 1.5 cm was found compared to right side lower limb and range of motion was found to be painful and restricted in terms of classical restricted internal rotation and abduction

Xray PBH AP and frog leg lateral view were taken and showed classical signs of perthes disease including

Fragmentation of epiphysis involving more than 70%, epiphysial collapse more than 66% , flattening of epiphysis , deformed femoral head categorising this patient into Catterall type 3 and herring type C



METHOD

Catterall type 3 and herring type C this patient with restricted range of motion including internal rotation and abduction first was managed with skin traction for 2 weeks

Following which varus derotation osteotomy was performed along with trochanteric epiphyseodesis to protect against trochanteric over growth .

Femoral capital epiphysis was well contained within acetabulum and patient was discharged on 14th day of post operative period following suture removal

Regular follow ups were taken and serial radiographs were taken till 2 years post operative period

At which disease was found to be healed and femoral head containment was maintained and remodelling was achieved satisfactory

Implant removal was done to avoid physeal arrest

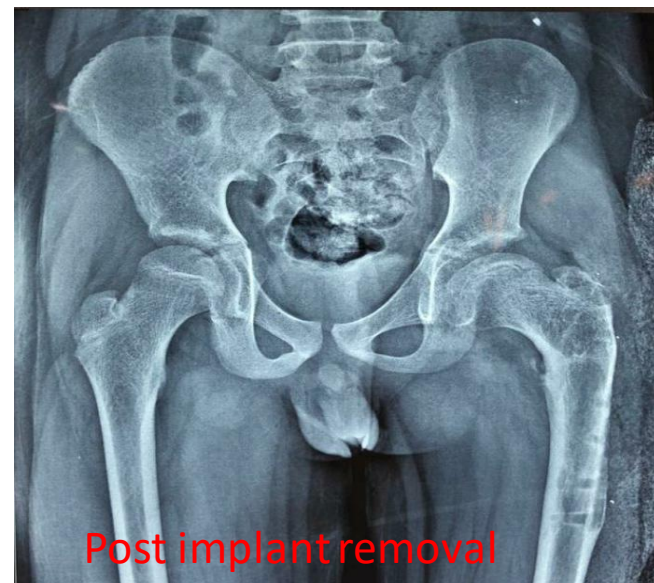
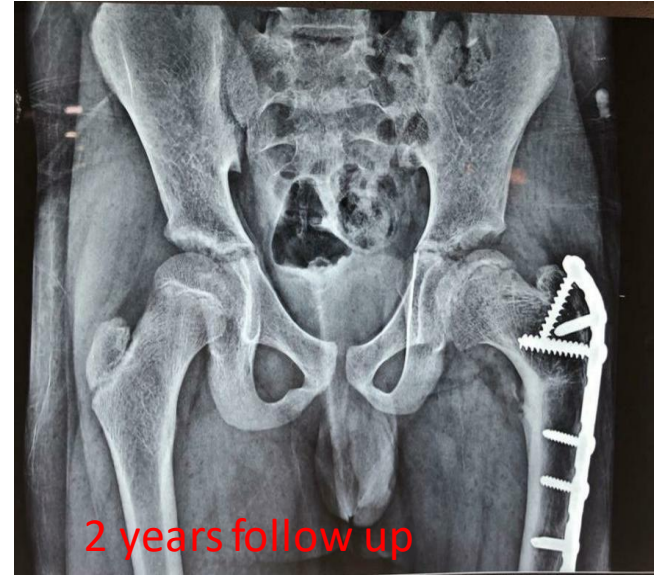
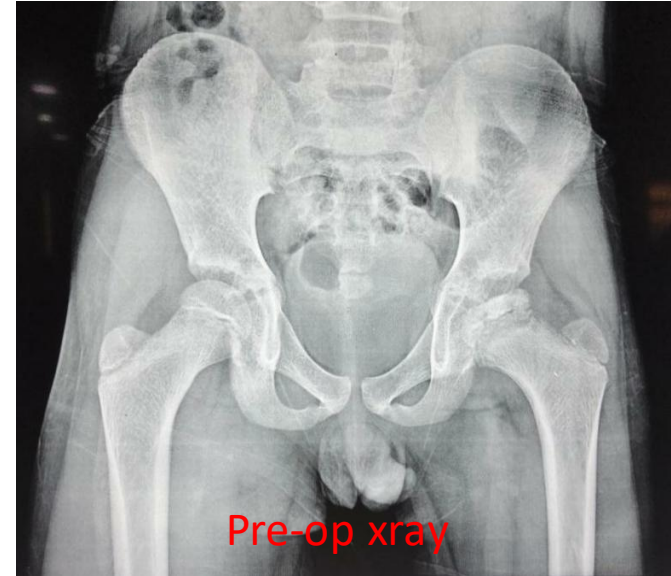
Satisfactory painless range of motion was achieved at 2 years post operative period , patient was able to do cross leg sitting and squatting

Results

Epiphysal quotient was calculated from the xray and clinical outcome was compared using Harris hip score following implant removal 2 years post VDRO procedure

scores	Pre op	Post op
EQ	0.4	0.66
HHS	<70	>90

ROM	Pre-op	Post op
Flexion	50	110
Extension	10	10
Internal rotation	5°	30
External rotation	20	35
Abduction	15	35
Adduction	20	30





Conclusion

The discussion still remains which treatment gives the best possible outcome in late stage perthes disease .but comparing this radiological and clinical parameters , VDRO still gives the good post operative results in late stage perthes disease in terms of range of motion and painless mobility and functionality .

References

1. Elijer H, Berg RP, Haverkamp D, Pécasse GA. Hip deformity in symptomatic adult Perthes' disease. *Acta Orthop Belg.* 2006;72:683–92. [[PubMed](#)] [[Google Scholar](#)]
2. Saini R, Goyal T, Dhillon MS, Gill SS, Sudesh P, Mootha A. Outcome of varus derotation closed wedge osteotomy in Perthes disease. *Acta Orthop Belg.* 2009;75:334–9. [[PubMed](#)] [[Google Scholar](#)]
3. Waldenstrom H. The first stages of coxaplanga. *J Bone Joint Surg.* 1938;20:559–66. [[Google Scholar](#)]
4. Kitakoji T, Hattori T, Kitoh H, Katoh M, Ishiguro N. Which is a better method for Perthes' disease: Femoral Varus or Salter osteotomy? *Clin Orthop Relat Res.* 2005;430:163–70. [[PubMed](#)] [[Google Scholar](#)]
5. Canavese F, Dimeglio A. Perthes' disease: Prognosis in children under six years of age. *J Bone Joint Surg Br.* 2008;90:940–5. [[PubMed](#)] [[Google Scholar](#)]
6. Rosenfeld SB, Herring JA, Chao JC. Legg-Calve-Peres disease: A review of cases with onset before six years of age. *J Bone Joint Surg Am.* 2007;89:2712–22. [[PubMed](#)] [[Google Scholar](#)]
7. Herring JA, Kim HT, Browne R. Legg-Calve-Perthes disease. Part II: Prospective multicenter study of the effect of treatment on outcome. *J Bone Joint Surg Am.* 2004;86-A:2121–34. [[PubMed](#)] [[Google Scholar](#)].