

## Summary

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Perthes'disease of 20 hips in 20 patients had been treated between 1989 and 1993, 16 hips were treated by femoral varus derotational osteotomy, 2 hips by Salter innominate osteotomy and 2 hips by combined osteotomy ( femoral and Salter ). The prerequisites for innominate osteotomy were only fulfilled in 2 cases and we found either procedure alone was not adequate in 2 cases ( in which combined osteotomy was performed ).

All cases were subjected to through clinical, radiological and laboratory examination.

The indications for surgical containment were : children older than 6 years old, Catterall group II, III or IV and at - risk. 19 hips had had lateral subluxation of the femoral head ( which is the most important at-risk sign ).

At the end of follow up, radiological findings revealed that the coverage of the femoral head was markedly improved as assessed by C- E angle. According to the measuring the sphericity of the femoral head by using the concentric circles of Mose, satisfactory results were obtained following surgical containment. Good results were obtained in 50% of cases; fair results in 35%, while poor results were obtained in 15% of cases ( cases grouped together ).

The results of femoral osteotomy were : 56% good; 31% fair and 13% poor.

The clinical evaluation had been done for all cases based on the range of motion of the hips, limb shortening and gait disorders giving a higher proportion of good results. Same observation was reported by others. The maximum amount of shortening was 2 cm

( not functionally disabling ), Trendlenburg's test and gait was positive in only 3 cases (15%). On studying the range of hip motion, the patients showed little functional disability following operative treatment ( 60% good ; 25% fair ; and 15% poor ).

The results for patients aged below 9 years were much better than those obtained in older children. Also, the chances of good results steadily decreased from Catterall group II to group IV, as well as, high incidence of good and fair results were detected when the epiphyseal extrusion index was less than 20 per cent.

It is important to emphasize that the early results of containment osteotomies were encouraging but a longer follow up period should be awaited to confirm these results and to evaluate the role of these osteotomies to prevent or to delay the late degenerative arthritis in the hip joints affected by Perthes' disease.