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Multiple hole drilling in osteonecrosis of femoral head-promising and better method of core decompression in Asian population

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Introduction: Core decompression of femoral head has been one of the best options for delaying the need for total hip replacement in cases of osteonecrosis of femoral head. It is also the best treatment option in earliest pre-collapse stages of disease. Techniques have been combined with several other adjunctive treatment modalities such as bone grafting and the addition of growth and differentiation factors. Our case series describes the multiple holes drilling in osteonecrosis of femoral head.

Materials & Methods: Our series include 20 patients who were diagnosed with osteonecrosis of femoral head of various aetiologies. We improvised the conventional decompression technique which usually requires 8 mm Michele trephine and DHS reamer with patient in fracture table. In our method, the patient was positioned in supine without the need of any fracture table and small incision of less than 1cm was made in lateral aspect of thigh. We used only a single 3.5 mm drill bit and multiple holes were drilled into the femoral head under C-arm guidance. We didn't use any adjunctive. Patients were allowed for partial weight bearing mobilisation with walker assistance for the first month and without any support thereafter.

Results: Our case series includes totally 20 patients of Ficat stage I, II and III of osteonecrosis of femoral head. We had a follow up of two years. Patients who were symptomatic and showing oedema in femoral head had better results. Harris hip score was used for assessment. Post operatively patients showed improvement clinically. Only one patient required total hip replacement later. None of the cases reported any peri-operative fracture.

Conclusion: Core decompression has been evolved the most reliable treatment for osteonecrosis of femoral head, especially for the early stages of necrosis. We have improvised the technique and made it quite simpler, less invasive and time saving and resulted in less morbidity, comparing to the conventional method of single coring, with better outcome and promising results. Also, considering the narrow width of Asian necks, multiple drill hole technique is more ideal option, as it eliminates the risk of fracture and other risks of single coring technique. Thus multiple hole drilling is the best method of core decompression of femoral head, especially in Asian population.

Biography

Sudarsana Gopalan N has done his MBBS from Sri Venkateshwara Medical College Hospital and Research Centre, Pondicherry University, Pondicherry, India. Currently he is a FIRST YEAR RESIDENT - DNB (Orthopaedic Surgery): Manipal Hospital, Bangalore, India.

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