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RADIOLOGICAL EVALUATION OF FRACTURE NECK OF FEMUR TREATED WITH CANNULATED SCREW (CCS) FIXATION WITH RESPECT TO UNION AND AVASCULAR NECROSIS OF FEMORAL HEAD

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Abstract:

Background of the study-The neck of femur fractures in young population is associated with high energy trauma. Osteosynthesis with Cannulated Cancellous Screws (CCS) is a described technique and helps in preserving head of femur. The outcomes of neck of femur fractures treated with Cannulated cancellous screws are debatable with respect to union and occurrence of Avascular Necrosis of head (AVN).

Aim- This aim of the study is to assess the union rate and occurrence of AVN in fracture neck of femur fractures treated with CCS.

Materials and Methods- All patients satisfying the inclusion criteria with femoral neck fractures planned for osteosynthesis were included in the study at a single institute. The patients underwent osteosynthesis with 6.5mm CCS after achieving satisfactory anatomical reduction. All patients were allowed toe- touch weight bearing after post- operative pain subsidence. Serial radiographs were taken at 6 weeks, three months, six months and at one year to assess for fracture union and signs of AVN.

Statistical Analysis

Chi-square analysis

Results- A total of 43 patients were included in the study. The mean age in the study is 47 years. There were 23 males and 20 females. There were 11 basicervical, 23 transcervical and 9 subcapital fractures. Radiological union was found in 8 of basicervical fractures, 17 in transcervical fractures

and 8 in subcapital fractures at the end of follow-up. There were three cases of AVN each in subcapital and transcervical fractures. Out of 23 patients with acceptable reduction there were two cases of AVN and out of 20 unacceptable reductions four had AVN. There were 10 cases of non-union and had direct relation to the reduction of fracture intra-operatively. **Conclusion-**The incidence of fracture neck of femur is common in younger age group. Achieving Satisfactory anatomical intraoperative fracture reduction is a single most important determinant factor in achieving good results. The incidence of AVN and non-union is found to be less with good reduction in long term follow ups.

Keywords: Fracture neck of femur, Non-union, AVN, Hemiarthroplasty