

Stress distribution analysis on semi constrained elbow prosthesis during flexion and extension motion

Abstract:

Total elbow arthroplasty can be the best decision for those patients that has advance elbow dysfunction, regarding to relieve the pain and restore the normal physiological function. As it is reported in literature most complication for linked prosthesis is loosening and mechanical failure. during of this study stress distribution of total elbow replacement in three different flexion angle during both flexion and extension motion was analyzed. According to results most stress concentration accrued near the articulation surface and pin. maximum stress was happened in 90 degree of flexion in both flexion and extension motion. This study was validated using experimental results which are reported in previous study.