Abstract:

Even though it is believed that a sublabral foramen (SF) requires no treatment, no objective data are available to establish whether this condition bears a relationship to anterior-inferior glenohumeral instability. Therefore, the influence on glenoid subchondral bone mineralization of an isolated SF was investigated, because the individual distribution of subchondral bone mineralization may be used as an indirect parameter for long-term stress distribution of joints. Two age- and side-matched groups of healthy glenohumeral specimens with SF (n = 10, aged 37-85 years) and without SF (n = 10, aged 36-86 years) were examined by computed tomography osteoabsorptiometry. As variables for comparison, the anterior and posterior density maxima on the glenoid were measured in a standardized manner. No shift of the anterior density maximum \( p(x1) = 0.353/p(y1) = 0.739 \) was found between both groups, which is in contrast to anterior glenohumeral instability. This indicates a long-term stress distribution in SF shoulders comparable to that in non-SF shoulders. The data suggest that an isolated SF is probably not disproportionately related to glenohumeral instability and support the general assumption that surgical treatment of SF is not required.