Balloon-guided inflation osteoplasty in the treatment of Hill-Sachs lesions of the humeral head: case report of a new technique.

The use of the extra-vertebral balloon osteoplasty is increasing and in the meanwhile it has become a safe surgical technique in the treatment of tibial head, distal radius and calcaneus fractures. In addition, we already could show in a biomechanical setup that the balloon osteoplasty might be a safe tool for reduction in the treatment of Hill-Sachs lesions, but clinical application has not been performed so far. We report the case of a 53 year-old male patient who was referred to our Trauma department (level I trauma center) after the first manifestation of a posterior shoulder dislocation due to an epileptic seizure, originated in an up to this date unknown -glioblastoma. After closed reduction of the dislocated shoulder the X-ray showed a subcapital fracture of the proximal humerus with a large reversed Hill-Sachs lesion. We performed an open surgery via a deltoideopectoral approach and balloon osteoplasty was used to reduce the impression fracture (Hill-Sachs lesion) before fixing the fracture with a locking plate. In the post-operative CT scan we could show an anatomical reduction of the Hill-Sachs lesion. At the follow-up examination one year after surgery the patient reached full range of motion and stated no re-dislocation of the shoulder nor instability or pain. The reduction of an impressed humeral head fracture by use of balloon...
Osteoplasty is a safe technique. This technique could be a new option in the treatment of Hill-Sachs lesions and might be an alternative to well known standard procedures like the remplissage or tendon transfers without affecting rotation.