Customized Allograft Bone Block Lateralization in Reverse Shoulder Arthroplasty Using Computer-Assisted Intraoperative Navigation

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Conversion reverse shoulder arthroplasty (RSA) often faces challenges such as severe glenoid retroversion and medialization of the center of rotation. Bony increased offset reverse shoulder arthroplasty (BIO-RSA) technique with femoral head allograft is a viable bony solution to these challenges. Computer-assisted intraoperative navigation ensures accurate placement of both the bone block and glenoid components. This technique describes custom BIO-RSA combined with the Exactech GPS navigation system (Gainesville, FL) in revision RSA, thereby restoring glenoid offset while maximizing accuracy of glenoid fixation and providing an effective solution for patients with severe glenoid bone loss and retroversion. We detail the surgical steps of this technique with a video demonstration.