KEY PROCEDURES

HARVESTING AUTOGENOUS CANCELLOUS BONE GRAFT FROM THE ANTERIOR ILIAC CREST

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Published outcomes of this procedure can be found at: *Bull NYU Hosp Jt Dis.* 2009;67(4):347-51, *Spine J.* 2009 Nov; 9(11):886-92, and *Clin Orthop Relat Res.* 1996 Aug;329:300-9.

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Abstract

Autograft bone graft harvest is an important surgical technique in the armamentarium of the orthopaedic surgeon. The iliac crest can provide a robust amount of bone graft, but using it carries a risk of complications including neurologic injury, gait disturbance, sensory dysesthesia, and ilium fracture. We present a surgical technical involving harvest of cancellous bone graft from the anterior iliac crest that minimizes the complication profile associated with tricortical bone graft harvest. It should be noted that there are differences between the outcomes of anterior and posterior crest harvests. Anterior autograft harvest is associated with a higher complication rate, with more iliac wing fractures, postoperative hematomas, and sensory disturbances. The posterior approach, however, is associated with more postoperative pain than the anterior approach, with the patient often experiencing more pain from the harvest than from the procedure itself. The all-cancellous iliac crest bone graft harvest provides the benefit of a large quantity of autogenous bone for various procedures, ranging from spinal fusion to osseous reconstruction. The major steps of this procedure are (1) offset of the surgical incision, (2) exposure of the iliac crest while avoiding neurologic structures, (3) identifying the location of and performing a corticotomy of the iliac crest, (4) harvesting the cancellous bone graft using curets, (5) obtaining hemostasis, and (6) performing a layered closure. The postoperative course entails immediate weight-bearing as tolerated. There is a potential for complications, which are discussed at the individual points of concern during this video.

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