

ILIAC CREST BONE GRAFT DONOR SITE MORBIDITY IN CRANIOFACIAL SURGERY: A SYSTEMATIC REVIEW

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PLASTIC SURGERY

BACKGROUND: The iliac crest bone graft (ICBG) is criticised for high donor site morbidity. Recent research suggests this morbidity is related to the patient population for which the ICBG is harvested. This systematic review is the first to delineate the type and incidence of ICBG donor site complications in craniofacial surgery.

METHODS: Two independent reviewers conducted a systematic review of multiple databases (MEDLINE, EMBASE, CINHAI, PEDRO and Cochrane Central Register of Controlled Trials) from 1917 to 2017. All studies utilizing the ICBG for craniofacial indications were included. Donor site morbidities, including immediate and chronic pain, hematoma, seroma, infection, hypertrophic/painful scarring, nerve injury, muscle herniation, iliac crest fracture and gait disturbance, were recorded. An incidence for each morbidity, excluding immediate pain, was calculated. An average Visual Analog Scale (VAS) score was calculated for immediate pain.

RESULTS: Forty-four studies, with 2801 patients, were included. Oral and maxillofacial (50%) and cleft reconstruction (40%) were the primary indications for surgery. Average immediate pain VAS scores on post-operative days 1 and 14 were 6.0 and 1.6, respectively. The incidence of donor site morbidities were as follows: acute (36%) and chronic (2.4%) gait disturbance, acute (11.9%) and chronic nerve changes (1.9%); hypertrophic/painful scar (5.3%); chronic pain (4.5%); hematoma (3.5%); seroma (2.1%); infection (1.5%); iliac crest fracture (0.86%) and muscle herniation (0%).

CONCLUSION: Chronic morbidity was lower than previously documented. Rare chronic morbidity illustrates that the ICBG remains a viable surgical option. The authors hope this review will facilitate surgical planning and informed consent.