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METHODS: Experimental overview (A) shows adult *En1^{Cre};R26^{mTmG}* transgenic (B) mice (n=5) underwent total body irradiation with 9 Gy for immunodepletion. Mice were then reconstituted with nucleated bone marrow cells from donor *black-6* mice via tail vein injections. Reconstitution was confirmed with FACS 2 weeks after whole body irradiation. Mice scalps were then irradiated with 5 Gy every other day for 12 days and allowed to recover for 4 weeks to facilitate fibrotic conversion. Irradiated scalps were grafted with 1000 μ L of fresh human lipoaspirate. Graft retention was measured *in-vivo* for 8 weeks using micro-CT scans and skin was harvested for histology.

RESULTS: Two weeks post bone-marrow transplant, >90% of circulating hematopoietic cells were non-fluorescent, signifying successful reconstitution (C). FACS at 8 weeks post-grafting demonstrated decreased *Engrailed-1* cells, signifying decreased fibrosis (D). At 8 weeks post-grafting, 4 of the 5 grafts demonstrated >50% graft retention, confirming successful grafting (E). Histological sections of scalp skin demonstrated significantly less *En1*+GFP cells, less dermal thickening, and collagen deposition in fat grafted irradiated scalp skin compared to controls (F).

CONCLUSION: Fat grafting mitigates radiation-induced fibrosis in skin by decreasing collagen deposition, remodeling collagen formation, and reducing presence of pro-fibrotic fibroblast subpopulations.

Effects of Limited Parental English Proficiency and Identifying As Hispanic on Psychosocial Functioning During Covid-19 in Children with Craniofacial Anomalies



Michelle K Oberoi, BS, BA, Kelly X Huang, HSD, Vivian J Hu, BS, Rachel M Caprini, BS, Sri Harshini Malapati, BS, Sarah Mirzaie, BS, Shaokui Ge, PhD, Justine C Lee, MD, PhD, FACS

Division of Plastic and Reconstructive Surgery, University of California, Los Angeles

David Geffen School of Medicine, Los Angeles, CA

University of California, Riverside School of Medicine, Riverside, CA

INTRODUCTION: The COVID-19 pandemic has disproportionately affected Hispanic children in California, who constitute 64.3% of cases and 42.9% of COVID-related deaths among minors. These effects may be enhanced among children with craniofacial anomalies who experience greater psychosocial stressors. This study investigates the effects of identifying as Hispanic and of limited parental English proficiency (LEP) on psychosocial outcomes in children with craniofacial anomalies before (BC) and during (DC) COVID-19.

METHODS: Twenty-six children (BC: age 13.31 \pm 2.77 years, 61.54% female, 80.77% Hispanic, 53.85% LEP) with craniofacial anomalies were evaluated at UCLA using the Pediatric Patient-Reported Outcomes Measurement Information System to assess anger, anxiety, depressive symptoms, peer relationships, and

cognitive function. BC scores were taken in the year contiguous to the pandemic, beginning March 1, 2020. Paired *t*-tests of BC and DC scores were performed.

RESULTS: Although patients collectively reported elevated depressive symptoms (BC:46.47 \pm 10.48, DC:50.41 \pm 9.59, p <0.05), it was pronounced in LEP (BC:43.41 \pm 10.05, DC:50.76 \pm 8.07, p <0.01) and in Hispanic patients (BC:44.21 \pm 9.82, DC: 49.84 \pm 9.07, p <0.01) but not in EP nor in non-Hispanic patients. Unlike other psychosocial outcomes that did not significantly worsen, cognitive function, a potential by-product of increased depressive symptoms, declined. LEP patients self-reported decreased cognitive function during COVID-19 (BC:50.13 \pm 4.92, DC:46.63 \pm 7.13, p <0.05), while EP patients did not. Similarly, Hispanic patients reported decreased cognitive function (BC: 48.28 \pm 5.88, DC:45.14 \pm 6.53, p <0.01), whereas non-Hispanic patients did not.

CONCLUSION: We previously reported LEP as a predictor for increased psychosocial dysfunction in patients with craniofacial diagnoses. Our results demonstrate increased depressive symptoms and decreased cognitive function DC in LEP and Hispanic patients.

Flap Coverage for Pressure Injuries: A Multi-disciplinary Team QI Initiative Over 3 Years



Alan D Rogers, MBChB, FACS, MSc, FCPlastSurg
FRCSI, MMed

Ross Tilley Burn Centre, Sunnybrook Health Sciences Centre, Toronto, ON, Canada

INTRODUCTION: Pressure Injuries are common preventable nosocomial complications that afflict spinal cord injured and critically ill patients. Stage 3 or 4 pressure injuries are at risk of developing osteomyelitis, and usually require debridement and flap closure to achieve wound healing and avoid life-threatening morbidity. The purpose of this QI initiative was to reduce the time to consultation and discharge after surgery, as well as to advocate for a sustainable, appropriately resourced service.

METHODS: All patients who underwent flap surgery for a pressure injury from August 2017 to August 2020 were included. Data collected were demographic and background medical details, operative details, as well as hospital course.

RESULTS: Twenty-Six patients underwent 55 flaps for 42 stage 4 pressure injuries (2.1 flaps per patient, range 1-5). The mean age was 51.4 years (range 20-81). Wounds involved the sacrum (n=20), ischium (n=16), trochanter (n=4) and perineum (n=2). Mean time from recognition to consultation was 14.6 days (range 1-53). Five resection arthroplasties were performed, and six patients underwent fecal diversion. Bone biopsies in 21 cases of osteomyelitis guided antibiotic therapy. Flap closure often followed debridement and negative pressure wound therapy with instillation. Complications included 2 hematomas, 3 partial