



forum

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Ergonomics in Follicular Unit Transplantation: A New Design for Stereoscopic Dissection Tables

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The labor-intensive nature of follicular unit transplantation (FUT) creates a setting for ergonomic intervention strategies. Fatigue, cramping, chronic back pain, and upper extremity disorders have been associated with factors such as: repetitive tasks, job specialization, awkward posture, finger movements with flexion or extension of the wrist, and “pinch” hand posture (Table 1).

features of the binocular stereoscope while achieving the favorable upper extremity ergonomics of the Mantis (Table 2). Specifically, creating a flat working surface to avoid finger movements with flexion or extension of the wrist, an activity associated with cramping, tendinitis, and carpal tunnel syndrome.

Recessed “cut-outs” that match the shape and height of the microscope

filled with appropriately shaped inserts, restoring the table to a conventional design (Figure 4).

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Table 1. Ergonomic Measures in Follicular Unit Transplantation

FACTOR	POSSIBLE INTERVENTION
Repetitive Tasks	(?) Inherent to FUT
Job Specialization	Job Rotation
“Pinch” Hand Posture	The Hair Implanter Pen (In graft placement)
Awkward Posture	Ergonomic Chair (Arnold)
Finger Movements with Flexion or Extension of the Wrist	—Mantis Scope —New Dissection Table

Specifically, microscopic dissection has biomechanical similarities to a factory workstation and lends itself well to ergonomic interventions. Currently there are two choices of microscopes: the Mantis and the binocular stereoscope. The author has designed a dissection table that provides for the superior optical

base are placed at 18¾ inch intervals (Figure 1). With stereoscopes placed into the “cut-outs,” the microscope cutting surface is flush with the rest of the table (Figure 2). This allows the dissection process to take place with the wrist in a neutral position (Figure 3, A–D). If a backlighting device or loupe dissection is desired, the recessed area is

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