

### The Monitored Anesthesia Care and Soft-Tissue Infiltration Technique (MAC-STILA) for Geriatric Hip Fracture Surgery Does Not Affect Workflow Efficiency Compared to Existing Anesthesia Techniques

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**Purpose:** Our objective was to assess how intraoperative workflow efficiency is affected by using the Monitored Anesthesia Care and Soft-Tissue Infiltration with Local Anesthetic (MAC-STILA) technique.

**Methods:** This was a single-center retrospective review of operatively treated hip fractures between January 2019 and January 2023. Inclusion criteria were OTA type 31A or 31B hip fracture; fixation with screws, short or long nail, or plate; and anesthesia either MAC-STILA, general anesthesia (GA), or spinal anesthesia (SA). Demographic and injury/surgical characteristics recorded. Intraoperative workflow efficiency was measured as time to start of anesthesia (wheels in to start of anesthesia), time under anesthesia (time under sedation or general anesthesia), and total operating room (OR) time (wheels in to wheels out). Covariates were compared using analysis of variance ( $P < 0.05$  significant).

**Results:** 395 patients (979 MAC-STILA, 158 SA, and 158 GA) were analyzed. The mean age of the entire cohort was 81.94 years (standard deviation 10.48). The MAC-STILA cohort was less independent at baseline ( $P = 0.032$ ). Time to start of anesthesia ( $P < 0.001$ ) and total OR time ( $p < .001$ ) was shortest with the MAC-STILA technique. There was no difference in time under anesthesia among the 3 cohorts.

**Conclusion:** As a newly developed anesthesia technique for geriatric hip fracture fixation, MAC-STILA does not impact intraoperative workflow efficiencies compared to general or spinal anesthesia.

Table 1. Analysis of Variance among MAC-STILA, General Anesthesia, and Spinal Anesthesia for Intraoperative Workflow Efficiency

	MAC-STILA	General	Spinal	P-value
Time to start of anesthesia (min) (S.D.)	12.57 (15.33)	13.55 (9.02)	19.29 (10.53)	<b>&lt;.001</b>
Time under anesthesia (min) (S.D.)	85.92 (29.58)	94.06 (30.68)	92.71 (27.42)	0.118
Total OR Time (min) (S.D.)	100.75 (24.72)	115.11 (33.05)	114.71 (30.32)	<b>&lt;.001</b>