

3444

Clinical evaluation of Wand vs. syringe local anesthetic injections. J.W. NICHOLSON\*, T.G. BERRY, J.S. SUMMITT, C.H. YUAN. (UTHSCSA-Dental School, San Antonio, TX)

A clinical trial compared traditional syringe (S) and computerized Wand (W) local anesthetic delivery systems for discomfort, post-operative sensitivity, and preference for future injections. At each of two appointments, randomized (S) and (W) were used for a maxillary supraperiosteal injection and for a mandibular inferior alveolar injection for 30 patients. Side of mouth and systems were reversed at the second appointment for a total of 120 injections, 60 W, 60 S, each divided into 30 maxillary infiltration and 30 mandibular block injections. Subjects rated injections using a 10 point VAS scale from discomfort of 0 = none to 10 = worst imaginable. Weighted Kappa statistics confirmed a high consistency between appointment responses to allow an average of repeated responses in the comparisons between the W and S systems. The study also compared operator ratings for ease of use.

Evaluation	Site	Syringe mean	Wand mean	Difference		P value
				mean	SD	
Injection Discomfort	Mandibular	3.13	2.67	0.47	2.75	0.36
	Maxillary	3.10	2.17	0.93	3.13	0.11
Post-op Discomfort	Mandibular	2.17	1.00	1.17	2.76	0.03
	Maxillary	0.90	0.90	0.00	2.08	0.62

Although the mean discomfort ratings for W were lower than S, it was not significant using this number of subjects. The post-operative discomfort for mandibular injections favoring W was significant. Patients preference for future injections: none- 30%, S- 20%, W- 50%. The operators indicated that the Wand system was easier to use.