

Dental block by ED providers gives substantial immediate pain relief in dental pain patients

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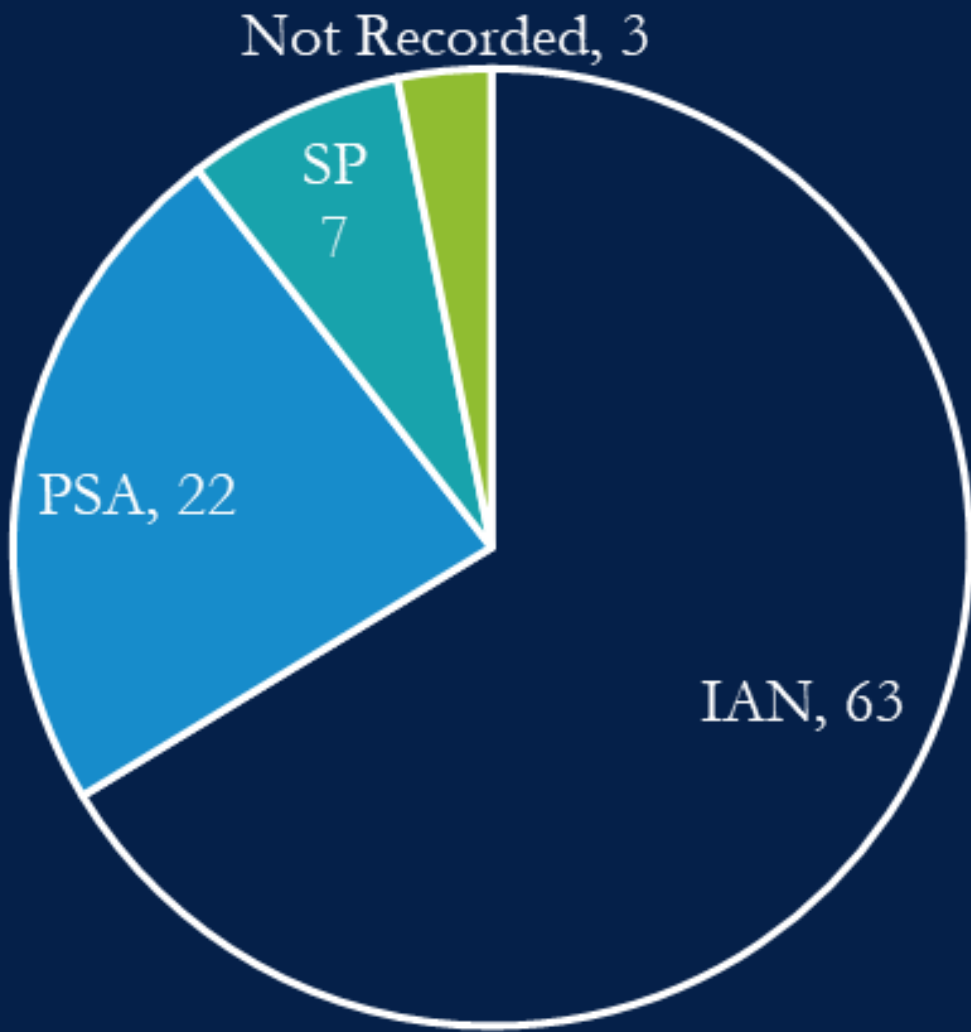
BACKGROUND

Dental nerve blocks (DNB) have been well studied in dental settings for dental pain patients, but there no literature on DNB efficacy in the ED, by ED providers.

METHODS

- 1. Collected from ED dental pain patients
- 2. Used standard ED equipment
- 3. Employed 3 standardized DNB types
 - 1. Inferior alveolar (IAN)
 - 2. Posterior Superior Alveolar (PSA)
 - 3. Supraperiosteal (SP)
- 4. Visual Analog Scale (VAS) to assess pain
- 5. Primary outcome of clinically significantly decreased pain after DNB
- 6. Secondary outcomes regarding correlations with efficacy and other factors such as infection, provider training, experience, and more

Results



- 95 Total injections
- IAN most common

Initial pain VAS	Final Pain VAS	Mean difference
8.0 cm (95% CI, 7.7cm – 8.4cm)	3.0 cm (95% CI, 2.4cm – 3.6cm)	-4.8 cm (95% CI, -4.1cm – -5.4cm)

Practitioner Experience	Pain VAS Decrease
0 prior DNB	-5.9 cm (95% CI -4.8 cm to – 7.1 cm)
1-5	- 4.0 cm (95% CI -3.0 cm to -5.0 cm)
6-10	-5.4 cm (95% CI -3.4 cm to -7.3 cm)
>10	-3.9 cm (95% CI -2.7 cm to -5.1 cm)

Practitioner Training Level	Pain VAS Decrease
Faculty (>5 years)	-4.9 cm (95% CI -3.6 cm to – 6.1 cm)
Faculty (<5 years)	- 4.1 cm (95% CI -2.8 cm to -5.5 cm)
Resident (R4)	-5.6 cm (95% CI -4.0 cm to -7.3 cm)
Resident (R3)	-5.2 cm (95% CI -3.6 cm to -6.8 cm)
Resident (R2)	-4.8 cm (95% CI -3.0 cm to -6.7 cm)
Resident (R1)	-4.6 cm (95% CI -2.9 cm to -6.4 cm)
PA	-4.9 cm (95% CI -0.2 cm to -9.6 cm)



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DISCUSSION

DNB by ED providers led to substantial clinically significant decreases in pain, with the IAN being most common. Importantly, no special equipment was needed and there didn’t seem to be significant difference in efficacy between providers with varying levels of experience (all providers given a brief tutorial either during conference or just prior to injection). Our study provides evidence in support of the use of DNB for dental pain patients in the ED.

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