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Diagnosis and Treatment of Acute Dental Pain in the Emergency Department

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Objective: Patients frequently present to the emergency department with dental pain. This study described the ability of the emergency physician (EP) to diagnose and treat common dental conditions. It also examined how commonly antibiotics are prescribed for undifferentiated dental pain. No prior studies have examined the diagnostic accuracy and treatment choices of EPs regarding dental pain.

Methods: An online survey was sent to Arizona EPs. The survey included six cases describing common causes of dental pain. Each case presented two questions regarding diagnosis or treatment.

Results: Responses were obtained from 55 physicians, 34 practicing EPs and 21 residents, yielding a response rate of 10.5%. The mean overall score was 72% (8.60/12, SD 1.81). Residency graduates had a significantly higher score [78% (9.35/12, SD 1.28)] than current residents [63% (7.57/12, SD 2.06)] ($p = 0.001$). The mean score for the diagnostic questions was 57% (2.85/5, SD 1.18). This score was significantly higher for residency graduates [68% (3.39/5, SD 0.95)] than for current residents [41% (2.05/5, SD 1.12)] ($p = 0.0001$). The mean therapeutic score of the five non-traumatic cases [79% (3.96/5, SD 0.11)] was significantly higher than the diagnostic score ($p < 0.0001$). The therapeutic score did not differ between the groups. It was found that 40.0% (22/55) of the participants state that they routinely prescribe antibiotics for undifferentiated dental pain.

Conclusions: This study shows that EPs do a better job of treating dental problems than diagnosing them. Residency graduates perform better than current residents. A large number of physicians still inappropriately prescribe antibiotics for undifferentiated dental pain. These results indicate a need for additional dental education in emergency medicine residencies.