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| **Name:** |
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| **Group:** |
| 8B-4 |
| **Basic Science Question:** |
| What is the inferior alveolar nerve? |
| **Report:** |
| The inferior alveolar nerve is a branch of the trigeminal nerve’s mandibular division (CN V3). The function of the inferior alveolar nerve is sensory innervation of the gingiva and mandibular teeth. Prior to the inferior alveolar nerve’s entry of the mandibular foramen, it branches into the mylohyoid nerve which provides motor innervation to the mylohyoid and anterior digastric muscles. The inferior alveolar nerve continues to track through the mandible in the mandibular canal before exiting through the mental foramen. Upon exiting the mandibular canal, the inferior alveolar nerve branches into its second terminal branch, called the mental nerve. The mental nerve’s function is to provide sensory innervation to the chin, lower lip and the anterior gingiva of the mandible.  The clinical implication of the inferior alveolar nerve is that it is often the target for the anesthetic prior to treatment in order to provide a painless experience. The most common technique used for inferior alveolar nerve block is to target the inferior alveolar nerve in the pterygomandibular space. Proper administration of the anesthetic results in complete anesthetization from the pterygomandibular space to the midline of the mandible. When forming a treatment plan for a surgically integrated prosthetic implant on the mandibular alveolar ridge, the location of inferior alveolar nerve must be considered. Trauma or damage to the nerve could cause permanent loss of sensation. |
| **References:** |
| Wolf KT, Brokaw EJ, Bell A, Joy A. Variant Inferior Alveolar Nerves and Implications for Local Anesthesia. *Anesth Prog*. 2016;63(2):84-90. doi:10.2344/0003-3006-63.2.84  Choi, P., Iwanaga, J., Dupont, G., Oskouian, R. J., & Tubbs, R. S. (2019). Clinical anatomy of the nerve to the mylohyoid. *Anatomy & cell biology*, *52*(1), 12–16. doi: 10.5115/acb.2019.52.1.12  Nguyen, J., & Duong, H. (2020, August 13). *Anatomy, Head and Neck, Alveolar Nerve*. Retrieved September 23, 2020, from National Center for Biotechnology Information. |