in patients in group I and group III. TAC levels showed no significant difference in response to treatment.

Conclusions: Se can be proposed as a treatment for OLP. Salivary MDA levels can be a biomarker for OLP disease severity.

LONG-TERM OROFACIAL PAIN REDUCTION AFTER REPEATED BOTULINUM TOXIN INJECTION INTO MASSETER MUSCLES

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Objectives: Neurotoxin injection into muscles to reduce movement or pain has seen increasing use and study. For orofacial pain, however, patient selection factors and long-term efficacy are not well characterized. The objective of the present study was to describe the clinical characteristics and effects in a series of patients with temporomandibular disorder [TMD] pain who had received multiple masseter neurotoxin injections over the course of years.

Methods: Patients referred for tertiary/quaternary care within the oral medicine clinical services from April 2015 to December 2019 were investigated. At least 40 patients with TMD pain were treated with botulinum toxin over this time period. Extensive baseline questionnaires along with pain drawings were used to characterize the patients, including graded chronic pain and related Pain, Enjoyment of Life and General Activity [PEG] scales. Symptom Checklist 90 Revised [SCL-90 R], General Anxiety Disorder 7-item [GAD-7], and Patient Health Questionnaire 9 [PHQ-9] psychological measures were also administered. Diagnostic Criteria for Temporomandibular Disorders [DC-TMD] examinations were done at each visit, along with standardized assessments of neurosensory abnormalities, with masseter and temporalis estimated volume. Fifty units of incobotulinum toxin A were injected into superior and inferior masseters bilaterally in each patient. Returning patients were seen in follow-up from 1 to 4.5 years later in the clinic with extensive metrics.

Results: Of 40 patients with TMD treated with at least 1 encounter with neurotoxin, 4 were located who had received at least 3 injection procedures over 12 months or longer and reported 50% or greater reduction in average pain intensity and pain impact. These patients' ages were 27, 29, 29, and 32 years; 3 were female. All reported having TMD pain for more than 5 years, and all were diagnosed with masseter myalgia, masseteric hypertrophy, definite sleep bruxism, migraine or tension-type headache, and mild to moderate psychological distress. All 4 were treated initially with self-care, nonsteroidal anti-inflammatory drugs, muscle relaxants, and occlusal appliances with some success, but they desired more reduction of pain and pain impact. All patients reported pain reduction after neurotoxin within 2-3 weeks, with effective (50-100%) pain relief for up to 6 months. Total injection visits ranged from 3 to 9 over the course of 1 to 4.5 years.

Conclusions: For a subset of patients with subacute TMD masseter pain, botulinum toxin injections resulted in substantial reductions in orofacial pain intensity and impact that could be sustained with repeated injections.

DISPARITIES IN THE GEOSPATIAL DISTRIBUTION OF DENTISTS IN THE UNITED STATES IN 2017

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Objectives: Advanced dental and oral health conditions disproportionately affect racial and ethnic minority patients and patients of low socioeconomic status. The impact that the geographic distribution of dentists has on these disparities is largely unknown. The aims of this study were to map the geographic distribution of dentists within the United States at the county level and to determine whether this distribution explains a component of the observed health disparities.

Methods: The number and primary practice locations of all dentists in the United States in 2017 were extracted from the Health Resources and Services Administration's Area Health Resources Files. These data were combined with US census data to determine the density of dentists per capita at the county level, which was analyzed for association with population-level demographic characteristics using bivariable and multivariable linear regression.

Results: The median density of dentists by county in the United States is 33.7 dentists per 100,000 people (standard deviation, 24.4). Multivariable analysis showed that the density of dentists was positively associated with the percentage of residents with a college education, where the highest quartile of counties had 28.1 more dentists per 100,000 than the lowest (95% confidence interval [CI], 25.6, 30.6), and was negatively associated with the percentage of residents who were uninsured, where the highest quartile of counties had 12.5 fewer dentists per 100,000 than the lowest (95% CI, −15.0, −10.0), but the density of dentists was not associated with median household income. Furthermore, the density of dentists was positively associated with a greater non-White population composition, where the highest quartile of counties had 7.7 more dentists per 100,000 than the lowest (95% CI, 5.3, 10.0). Finally, the density of dentists was associated with some quantiles of urbanicity, where the most rural quantile of counties had 12.4 fewer dentists per 100,000 than the most urban (95% CI, −15.25, −9.56).

Conclusions: Dentists are unequally distributed within the United States. Controlling for population characteristics, counties with greater non-White population composition have more dentists per capita. Geographic access was not shown to adequately account for observed oral health disparities, indicating that there may be more important barriers to dental care for minority patients.

ANALYSIS OF LEARNER DEMOGRAPHICS FROM A MASSIVE OPEN ONLINE COURSE IN ORAL MEDICINE

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