A Static-Progressive Mouth Splint for Microstomia
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Introduction:
Microstomia resulting from facial burns poses a challenge to surgeons and therapists. Although a variety of prefabricated and custom appliances exist on the market, many of these are expensive and primarily address horizontal stretching. The situation is further complicated for patients who only have function of one upper extremity as positioning and securing currently available commercially-made devices frequently requires the use of two hands.

Methods:
A “Teeter-Totter” splint was designed using tongue depressors, splinting material and zip-ties. This splint allows a patient to provide appropriate stretch to the lateral folds of their mouth while only using one extremity. In addition, the device is adjustable to progress the patient through their rehabilitative course.

Results:
When used, the “Teeter-Totter” splint resulted in a 15% improvement in lateral motion (from 55mm to 66mm) and a 12% improvement in vertical mouth opening (18mm to 28mm) in one patient, while a 23% improvement in overall mouth opening was exhibited by second patient. Both patients only had to use one extremity to secure and use the device. The therapist has control over the amount of stretch that is desired, and once adjusted, the tension is easily reproducible by the patient.

Conclusions:
The “Teeter-Totter” splint is effective in addressing microstomia to the lateral folds of the mouth; it can be fabricated within minutes using material that can be found in virtually every out-patient rehabilitation facility. It is inexpensive when compared to prefabricated and custom appliances.

Applicability of Research to Practice:
The “Teeter-Totter” splint can be a great addition to burn therapists in their approach to rehabilitating a patient with microstomia.

Author Disclosure Information:
M. S. Reynolds, None.,
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