

4th Asia Pacific Congress & Expo on **Dental and Oral Health** July 27-29, 2015 Brisbane, Australia

Ankyloglossia and shortened maxillary labial Frenuli

Scott A Siegel

State University of New York, USA

Ankyloglossia and shortened maxillary labial Frenuli are a common malady affecting breastfeeding infants. These issues are correlated with aerophagia and resultant reflux in infants and children. The current pediatric GI and oral literature do not differentiate between aerophagia induced reflux and Gastroesophageal Reflux (GER) and Gastroesophageal Reflux Disease (GERD). The approach of frenotomy of maxillary labial and lingual freni has been shown to reduce aerophagia and concomitant reflux in breastfeeding infants with either prevention of prescription antacid medications and/or weaning these infants off of medications. A series of 350 patients was reviewed and findings discussed. A prospective study looking at an ultrasound of lip and tongue movement and airflow before and after frenotomy and evaluation of symptoms of aerophagia/reflux is underway.

drscottsiegel@mail.com

The next big thing in clear aligner's therapy

Sherif Kandil

K Line Europe, Germany

Introduction: 3D printing has significantly improved dental industry by fabricating best-fit oral appliances with a wide range of hybrid materials and variable properties. Clear aligners could provide proper teeth alignment painlessly, not too lengthy nor costly and effortless compared to conventional braces. The use of 3D printing in clear aligners is limited to fabricating supporting models on which thermoformable sheets are pressed. This process is lengthy and requires human finishing and some material waste.

Objectives: To exploit 3D printing technology in producing clear aligners with easier setup and less time and material waste.

Aims: To introduce new aligners with properties of the currently used ones and with minimum human intervention in their fabrication.

Methods: Specialized software made the orthodontic tooth movements on digital models. Then, the gross movement was subdivided onto submodels. A splint was designed, virtually smoothened and finished as a negative replica for each submodel mimicking the fitting surface of the teeth. The splint was 3D printed with plastics in ≤ 1 mm thickness.

Results: Aligners were fabricated in rigid and soft forms. Rigid aligners had reasonable strength but low elasticity, while the soft ones had better adaptation and resistance to fracture but less strength. The aligners were not clinically tested and still subject to change.

Conclusions: Aligners could be fabricated with direct 3D printing with little effort, time, material and human intervention. Together with the material and 3D printing technology providers, we may improve the overall properties of the aligners and substitute the current technique.

s.kandil@kline-europe.de