An oral-motor intervention study in infants with Down Syndrome

Down Syndrome (DS) is frequently associated with oral-motor dysmorphologies that compromise oral functions such as sucking, chewing, and speech production. Therapeutic interventions with stimulating palatal plates (SPP) have been proposed to prevent and improve oral-motor dysmorphologies in DS. We developed a new digital workflow for the manufacturing and use of a modified SPP, including the assessment of oral-morphological features and language abilities. We describe the implementation of new workflow (from mouth scanning and SPP use to the assessment of oral-morphology and language abilities) and report on the preliminary results concerning its acceptability and impacts on oral-motor features and the development of language and communication skills. The workflow had good acceptability by infants and parents. Within the limitations of the current study, it was shown that it constitutes a viable and infant-friendly approach to the production and use of SPP, and thus promises to contribute to improving oral morphology and promoting auditory-motor language skills.