

Research shows timing improves cleft palate surgery

Research by Dr. Damir Matic, a scientist with Lawson Health Research Institute in London, Ontario is changing the way cleft palate surgeries are performed throughout North America and around the world. Matic has been conducting research to determine the optimal time to close the gum tissue of cleft palate patients. His research suggests that it is best to wait until the child is older.

Matic is a craniofacial/plastic surgeon at London Health Sciences Centre and a professor in the department of surgery at the Schulich School of Medicine & Dentistry at The University of Western Ontario.

Surgical timing has been a controversial topic with various cleft centers around the world opting for early closure at about 3-6 months of age. However, Matic, using research compiled over the past 20 years has shown that the best time to close the cleft at the alveolus (gum) in patients with either one or two sided clefts is at eight or nine years of age prior to canine tooth eruption. "We close the lip at three months of age, we close the palate at one year old, but we don't touch the gum until they are eight or nine, a time that corresponds to when the adult teeth start to appear," Matic says.

The study represents a significant breakthrough in cleft research involving an unprecedented sample size of 136 children. Matic and his team were able to look at a large group of children who had the cleft repair performed early, and then compare the group to a large group of children who had the repair performed when they were older.

"Cleft is the most common facial anomaly and the second most common congenital anomaly among children," Matic adds. "Our research is clinically based in terms of looking at how we can make our repairs better in light of our current knowledge and past discoveries. Based on our data, the down-side of early closure is much worse than any potential benefits, and repairing the cleft prior to this time (7-9 years) will damage facial growth."

Part one and two of the study looked at bone production and facial growth in unilateral clefts and was presented in 2006 and 2007 to the American Cleft Palate Association (ACPA), the largest society dedicated to cleft research in the world. Matic's research won best paper in the Junior Investigator Competition out of hundreds of submissions from around the world.

Part three of the study looked at how the repair affects bone production and facial growth in patients with bilateral clefts. These findings were presented at the ACPA meeting in Philadelphia last month. At this meeting, Matic was involved in a panel discussion/debate regarding his research where he recommended the later closure. The overall majority of the participants voted with Matic, leading to a change in recommendation in the way cleft palates will be treated in hospitals around the world.

Source: University of Western Ontario

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