Robotic Reconstructive Surgery for Correction of Soft Palatal Clefts

An article in the current issue of The Cleft Palate–Craniofacial Journal describes using robotics-assisted surgery on cleft palates, from successful testing on a cadaver to performing surgery on 10 live patients. A control group of 30 patients was treated with the same technique using conventional, non-robotic approaches.

Lawrence, KS (PRWEB) April 28, 2016 -- The Cleft Palate–Craniofacial Journal – Surgical intervention for cleft palates begins early. Surgery to repair the cleft often begins prior to a child’s first birthday. Many procedures are performed to help normalize speech, hearing, maxillofacial growth, and avoid the formation of fistulas. Minimally invasive robotics-assisted surgeries have fundamentally changed how many conditions involving internal organs such as the colon, uterus, and prostate are treated. However, the role of these robots when it comes to head and neck procedures are not as well documented. Repair for cleft palate using robotics in a clinical setting had not been attempted until very recently.

The article “Transoral Robotic Cleft Palate Surgery” in the current issue of The Cleft Palate–Craniofacial Journal describes using the da Vinci Surgical System® in cleft palate surgery from successful testing on a cadaver to performing surgery on 10 live patients, aged 9 to 12 months. In order to measure how the robotics altered the surgical performance, a control group of 30 patients was treated with the same technique using conventional, non-robotic approaches.

The authors found that on average using the da Vinci System took 35 minutes longer than manual instruments. However, the robotic-assisted device allowed the surgeon to obtain a three-dimensional view of the surgical field, which helped increase precision and decreased hand tremors. Assistance by the da Vinci System also allowed for fewer and shorter incisions and potentially improved the function of the Eustachian tube, which helps in equalizing air pressure in the ear drums. The authors encountered zero infections and no other surgery-related complications, which resulted in a shorter recovery time for patients.

“Robotic surgery combines the advances in digital control and high resolution optics. It has revolutionized the treatment of many diseases, which otherwise require extensive open surgeries with prolonged recovery...It remains unclear if robotic surgery will be widely adopted for palatoplasty, but this report is certainly worth noting as a key landmark in the evolution of palate repair surgery,” said Jack Yu, editor of The Cleft Palate–Craniofacial Journal.

The robotic surgical approach was deemed safe for cleft palate surgery by the authors of the study. Although da Vinci assisted surgery offers numerous improvements over current techniques, the robotic equipment is large and costly. Further development of this technology would help get it into more operating rooms worldwide.


About The Cleft Palate–Craniofacial Journal
The Cleft Palate–Craniofacial Journal is an international, interdisciplinary journal reporting on clinical and research activities in cleft lip/palate and other craniofacial anomalies, together with research in related laboratory sciences. It is the official publication of the American Cleft Palate–Craniofacial Association (ACPA). For more information, visit http://www.acpa-cpf.org/.
Contact Information
Jacob Frese
Allen Press, Inc.
http://allenpress.com/publications/journals/ipsm
+1 (785) 865-9248

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