Extended Abstract

Functional outcome and complications of robot-assisted free flap oropharyngeal reconstruction

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Abstract

The purpose of this education was to measure the consequences of robotic-assisted oropharyngeal reconstruction comparison with conventional free flap rebuilding. The robotic surgical system delivers a clear, overblown, 3-dimensional (3D) view as well as a accurate and stable instrumental movement, which minimizes several technical problems that may be encountered in the surgical treatment of oropharyngeal tumours

A retrospective review of successive patients who underwent reconstructive operations by free radial forearm fasciocutaneous flap for oropharyngeal defects over a 20-month period (May 2013 to December 2014). The primary translator variable was method of reconstruction (conventional versus robot-assisted). Consequence events were postoperative difficulty rates, revision rates, and postoperative functional outcomes.

The study sample consisted of 47 subjects who experienced reconstructive operations using free circular prepare fasciocutaneous flap for oropharyngeal defects (33 conventional and 14 robot-assisted reconstructions). Complication rates between the conventional and robot-assisted groups were similar for flap failure, wound infections, partial necrosis, hematoma or seroma formation, wound dehiscence, and fistula formation. The revision needful extra operation was comparable between the two partners. The functional outcomes postoperatively of robot-assisted reconstructions are healthier than conventional reconstructions as established by the Functional Intraoral Glasgow Scale scores.

There is no important change in difficulty and revision rates between conventional versus robot-assisted oropharyngeal reconstructions. The application of a robotic surgical system seems to be a safe option with healthier oral function postoperatively in the free flap rebuilding of oropharyngeal defects without lip or mandible splitting.

Robotic surgical systems provide a clear, overstated 3-dimensional visualization as well as precise, stable instrumental movement, thus minimizing technical problems that may be encountered in the surgical treatment of oropharyngeal tumours.

This reading assessed the outcomes of robotic-assisted free flap oropharyngeal reconstruction compared with those of conventional free flap reconstruction.

 A retrospective review of 47 patients who experienced reconstructive operations using a free circular forearm fasciocutaneous flap for oropharyngeal defects was shown over a

20-month period (May 2013-December 2014). Difficulties were assessed for a robot-assisted renovation group and a conventional reconstruction group; postoperative complication rates and revision rates were additional evaluated. The Functional Intraoral Glasgow Scale (FIGS) was accepted for useful result valuation.

This study hired 47 folks that experienced reconstructive operations employing a free radial forearm fasciocutaneous flap for oropharyngeal defects (14 robot assisted and 33 conventional reconstructions). The mean postoperative FIGS score was 10.29 ± 2.02 Within the robot-assisted group (P = 0.010) and **8.42** ± 2.29 within the conventional group at 1 month postoperatively. The important postoperative FIGS mark was 12.57 ± 1.91 within the robot-assisted group (P = 0.005) and 9.91 ± 3.09 within the conventional group at 3 months postoperatively. Difficulty rates between the robot-assisted and standard groups were similar for flap failure (P = 0.531), partial necrosis, wound infection, hematoma or seroma formation (P = 0.893), wound dehiscence, and fistula formation (P = 0.515). The amount of flap revision operations requiring additional surgery (P = 0.627) was comparable between the cohorts. There is no important change in problems or revision rates among the robot-assisted and conventional oropharyngeal reconstructions. The useful postoperative results of robot-assisted reconstructions are larger to those of conventional reconstructions. Robotic surgical systems provide a safe select with optimal postoperative oral function for the free flap reconstruction of oropharyngeal defects without lip or jaw splitting.

He is an attending cosmetic surgeon at Taichung Veterans General Hospital, Taiwan. He has quite 10 years of experience as surgeon and makes a specialty of wound treatment and anaplastic. He obtained medical degree from Chung Shan Medical University. He has also authored many research publications and is an energetic member of the many surgery societies as Taiwan Society of cosmetic surgery, Member of Taiwan Society for Surgery of the Hand, Member of Taiwan Society for Reconstructive Microsurgery. Surgical robots have the potential to supply surgeons with increased capabilities, like removing physiologic tremor, scaling motion and increasing facility. Several surgical specialties have subsequently integrated robotic surgery into common clinical practice. Plastic and reconstructive microsurgical procedures haven't yet benefitted significantly from technical developments observed over the last twenty years. Several studies have successfully demonstrated the feasibility of utilizing surgical robots in cosmetic surgery procedures, yet limited work has been done to spot and analyses current barriers that have prevented wide-scale adaptation of surgical robots for microsurgery. Therefore, a scientific review using PubMed, MEDLINE, Embase and Web of Science databases was performed, so as to judge current state of surgical robotics within the sector of reconstructive microsurgery and their limitations. Despite the theoretical potential of surgical robots, current commercially available robotic systems are suboptimal for plastic or reconstructive microsurgery. Absence of bespoke microsurgical instruments, increases in operating time, and high costs related to robotic-assisted provide a barrier to using such systems effectively for reconstructive microsurgery. Consequently, surgical robots provide currently little overall advantage over

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conventional microsurgery. Nevertheless, if current barriers will be addressed and systems are specifically designed for micro surgery, surgical robots may have the potential of meaningful impact on clinical outcomes within this surgical subspecialty.

The robotic surgical system provides a transparent, magnified, 3-dimensional (3D) view well as a definite and stable instrumental movement, which minimizes many technical difficulties that will be encountered within the surgical procedure of oropharyngeal tumours. A preliminary results of trans oral robot-assisted free flap reconstruction of oropharyngeal cancer is presented here in-between May and December 2013, the applied scientist Surgical System (Da Vinci Si, Intuitive Surgical, Sunnyvale, CA) was employed in 5 (4 men and 1 woman) cases of oropharyngeal reconstruction. Robot-assisted reconstruction was performed for in set of the flap and for performing a venous anastomosis of the free radial forearm fasciocutaneous flap.

All of the reconstructive surgeries were successful without flap failure or take-backs. There have been no wound infections or fistulas. The application of a robotic surgical system seems to be a secure option within the free flap reconstruction of oropharyngeal defects without lip or mandible splitting.