

주최·주관 대한심장혈관흉부외과학회

2024 대한심장혈관흉부외과학회 제56차 추계학술대회

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Feasibility of Robotic Assisted Thoracic Surgery in Thoracic Outlet Syndrome : Outperforming Conventional Techniques with Precision and Beauty

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- **Thoracic Outlet Syndrome (TOS)** is a group of disorders that occur when the blood vessels or nerves in the space between clavicle and the first rib is compressed.
- Surgery is necessary to relieve the compression by removing a cervical rib, part of the first rib, or releasing tight muscles or scar tissue for severe TOS patients.
- The most commonly used surgical approaches to first rib resection(FRR) are supraclavicular and transaxillary approach.
- FRR using robotic assisted thoracic surgery(RATS) could provide better exposure of the first rib and less retractions to the brachial plexus.
- FRR using RATS could provide better cosmetic results.



- Single center, retrospective study
- Patient cohort
 - Patients who received FRR
 - Period : November 2015 ~ May 2024
- Data collection
 - Age, sex, body mass index, type of TOS
 - Satisfaction, cosmetic problem data were collected by phone call follow up



Results

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	Conventional FRR (n=36)	RATS FRR (n=7)	P value
Age	27.2	25.0	<0.001
Sex (Male, %)	29 (80.5%)	4 (57.1%)	0.126
BMI (mean)	22.9	25.7	<0.001
Side(Right, %)	18 (50%)	6 (85.7%)	0.006
Type of TOS			<0.001
Neurogenic	22 (61.1%)	4 (57.1%)	
Venous	8 (22.2%)	3 (42.9%)	
Arterial	6 (16.7%)	0 (0%)	



Results

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	Total FRR (n=43)	Conventional FRR (n=36)	RATS FRR (n=7)	P value
Hopitalization (days) (median)	6 (2-14)	6 (2-14)	2 (2-3)	<0.001
Satisfaction	4 (1-5)	4 (1-5)	5 (4-5)	<0.001
Cosmetic problem	1 (1-4)	3 (2-4)	1 (1-1)	<0.001

Satisfaction scale : 1 – Very unsatisfied, 2 – Unsatisfied, 3 – Average, 4 – Satisfied, 5 – Very Satisfied

Cosmetic problem scale : 1 – No problem, 2 – Slightly concerned, 3 – Concerned, 4 – Very concerned



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Conclusion

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- FRR using RATS significantly decreases hospitalization days.
- FRR using RATS provides for satisfaction to the patients in not only functionally, but also cosmetically.
- FRR using RATS could provide better treatment results for severe TOS patients.



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