Right External Jugular Vein and Left Internal Jugular vein as Alternative Access for Right Internal Jugular Vein for Tunneled Dialysis Catheter: A Prospective Comparative Study <u>Vineet Behera</u>, Vishwanath G, G Shanmugraj, Prabhat Chauhan, Rajeev Sivashankar, Ananthakrishnan R

	BACKGROUND	WCN2	25-AB-1232	STUDY	DESIGN
 Right IJV is the comm After exhaustion Rt IJ or right external jugula Rt IJV remained the observed the observ	nonest site of tunneled dialysis cathe JV, other sites like left internal jugular ar vein (Rt EJV), femoral or other veir default option, but Rt EJV use is incre • COMPARE RT EJV VS LT IJV FOR • 1 year patency • Catheter dysfunction at 1 year • Periprocedural complications	ter (TDC). vein (Lt IJV), left as, may be used. easing	 <u>Study design</u>: Prospective <u>Study Population</u>: ESRD of <u>Study Period</u>: Jan 2020 to <u>Study Centre</u>: Nephrology <u>Sample size</u>: 50 (EJV arm <u>Consent/ IEC Approval</u>: 0 <u>Statistical methods</u>: SPSS 	non-randomised study n dialysis with no AVF Sep 2023 Centre, INHS Asvini 23) (IJV arm 27) Obtained version 19	 Inclusion Criteria 1. ESRD on dialysis needing TDC 2. No AVF or CAPD prospects 3. Exhausted Right IJV Exclusion Criteria 1. Superior vena cava occlusion 2. Symptomatic edema arm 3. Unwilling for study/ follow up 4. Patients expired before event
Right EJV Arm	h Left IJV Arm	STUDY	METHODOLOGY	Primary Outcomes	• Cumulative catheter patency (TDC insertion to

Te	Patent Rt EJV Patent Rt BCV	Occluded Rt E Occluded Rt E Patent Left IJV/ L	 Centry venog All ins guida Symn Follow 	al vein patency graphy. Sertions were do nce using stand netrical tip cathe w up > 1 year	was check one under lard protoc eter (Palino	ked using doppler or CT USG & fluoroscopic cols drome, Covidien)	Seconda Outcom	Primova Primova (TDC i dysfun b Immed completer	ry catheter pate nsertion to cathe ction) diate procedura ications	ncy ter
					RESULT	S				
Sn	Variable	Total (n=50)	Rt EJV Arm (n=23)	Lt IJV Arm (n=27)	P value	S Primary Outcome N o	Rt EJV Arm	Lt IJV Arm	Hazards Ratio (95% CI)	P value
1	Males	30 (60%)	13 (56.2%)	17 (62.9%)	0.32	1 Catheter removal	04 (17.3%)	10 (37%)	HR 0.67, (0.62-0.97)	p=0.008
2	Mean age (in years)	45.4±5.5	42.6±3.5	48.6±1.5	0.41	2 Cumulative patency	345.6±49.5 days	262.6±39.5 days		
3	Diabetes	26 (52%)	10 (43.4%)	16 (59.9%)	0.1	NUMERAL DESCRIPTION		Se: 13091204		PERMICATELL
4	HD Vintage (in months)	10.1 (6.2–26.8)	9.2(6.2–24.1)	12.6(7.1-26.8)	0.09	NUMBER OF STREET			IN	HS ASVINI HOSPITAL STUDY_001
5	Duration prior catheter (m)	8.6 (6.2–24.6)	7.1(6.2–14.9)	10.6(8.1-24.6)	0.05					
6	Previous catheter infection	23 (46%)	8 (34.7%)	15 (55.5%)	0.03	the provide the second			- Alton	

7	Previous malfunction	22 (44%)	12 (47.8%)	11 (40.7%)	0.1
9	BCV/SCV Stenosis	14 (28%)	5 (21.7%)	9 (43.4%)	0.008



Secondary Outcome	Rt EJV Arm	Lt IJV Arm	Hazards Ratio (95% CI)	P value	Patency	10
Catheter dysfunction	6(26%)	14(51.8%)	HR 0.79, (0.72-1.32)	p=0.02	atheter	
CRBSI	7(25.9%)	4(17.3%)	HR 0.92, (0.42-1.44)	p=0.3	ulative (5
Primary patency	194.6±39.5 days	160.6±29.5 days		p=0.1	Cum	

SN	Cumulative catheter patency	Hazards Ratio (95% CI)	P value
1	Age > 50 years	HR 0.79, (0.62-1.32)	p=0.52
2	Male sex	HR 0.92, (0.42-1.44)	p=0.3
3	Diabetes	HR 0.82, (0.52-1.52)	p=0.2
4	HD vintage > 1 year	HR 0.55, (0.22-2.12)	p=0.7
5	Catheter > 1 year	HR 1.92, (1.22-3.32)	p=0.02
6	Thrombosis CV	HR 2.1, (1.34-4.32)	p=0.01

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DISCUSSION

12	D	240	360
		No. of the second se	

No of days

CONCLUSION



Internal jugu

External jugula

Femoral

Subclavian

Lumbar

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SNo

2

3

KDOQI CLINICAL PRACTICE GUIDELINE FOR VASCULAR ACCESS: 2019 UPDATE

^b Charmaine E. Lok, Thomas S. Huber, Timmy Lee, Surendra Shenoy, Alexander S. Yevzlin, Kenneth Abreo, Michael Allon, Arif Asif, Brad C. Astor, Marc H. Glickman, Janet Graham, Louise M. Moist, Dheeraj K. Rajan, Cynthia Roberts, Tushar J. Vachharajani, and Rudolph P. Valentini

When there are valid reasons for CVC use (Guideline Statement 2.2) and duration of use is expected to be prolonged (eg, >3 months) without anticipated use of AV access, CVC may be placed in the following locations in order of preference:

- > Strengths
 - Only study comparing Rt EJV vs Lt IJV
 - Screen for thrombosis
 - Good follow up

> Limitations

- Small sample size
- Non randomized
- Lack of skill for EJV
- Excluded SVC/CV stenosis

Rt EJV access is superior to left IJV as an alternate insertion route for TDC in patients of ESRD on hemodialysis with exhausted RIJV.

REFERENCES

- C.E. Lok, T.S. Huber, T. Lee, et al. KDOQI Clinical Practice Guideline for vascular access: 2019 update [published correction appears in. Am J Kidney Dis. 2021;77:551. Am J Kidney Dis, 75 (suppl 2) (2020).
- Vein Pei Wang*, Yufei Wang, Yingjin Qiao, Sijie Zhou, Xianhui Liang, Zhangsuo Li. A Retrospective Study of Preferable Alternative Route to Right Internal Jugular Vein for Placing Tunneled Dialysis Catheters: Right External Jugular Vein versus Left Internal Jugular PLoS ONE 11(1): e0146411