

Believe In Mini-midlines: A Case Series From A Tertiary Pediatric Hospital

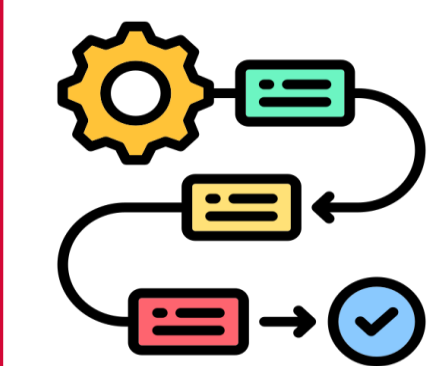
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INTRODUCTION

Mini-midline catheters represent an intermediate vascular access option between standard peripheral cannulas and central venous catheters. They are particularly useful in pediatric patients with difficult intravenous access (DIVA) or those requiring stable venous access for therapies lasting more than 48 hours. Despite increasing use, pediatric data on indications, outcomes and complications are still limited. This study reports a relatively large pediatric case series from a tertiary hospital.

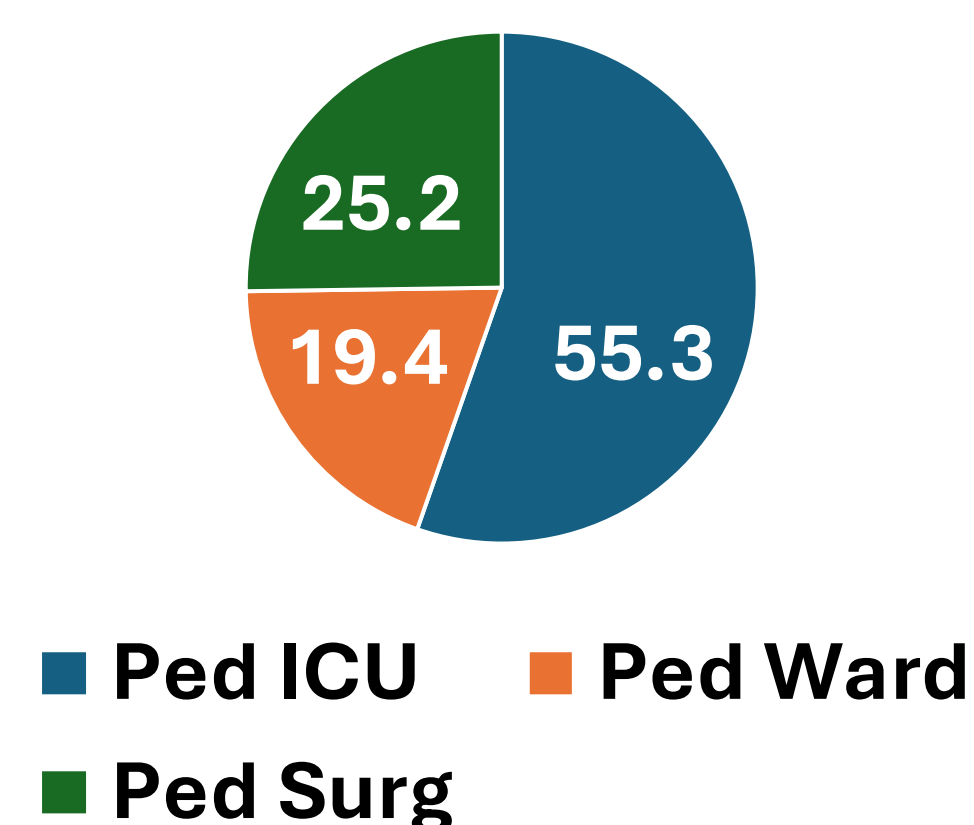


METHODS

A prospective observational study was conducted on all pediatric patients who received a mini-midline catheter at Children's Hospital V. Buzzi in 2025. Variables collected included patient demographics, ward, indication, catheter size, insertion technique, operator type, dwell time and complications. **All insertions were performed under ultrasound guidance by trained medical and nursing staff.**

Study Population	103 patients
Sex	M 73/F 30
Median Age	4 years
	32 (31%) < 1 year
Median Weight	17 kg
	38 (36%) < 10 kg
Median DIVA3 Score	5

Ward Distribution (%)



RESULTS

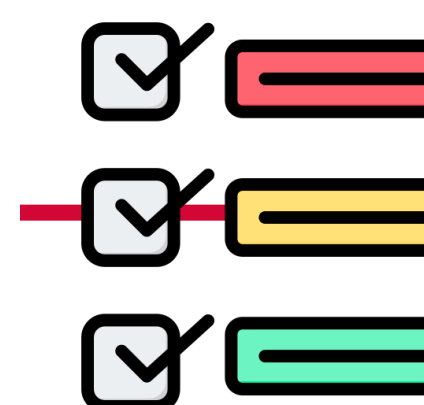


Indications	33 (32%) Antibiotic Therapy
	60 (58.3%) IV infusion
	10 (9.7%) Anti-seizure medications
PICU Patients (56)	25 (44.6%) Respiratory Failure
	20 (35.7%) Neurologic/Syndromic disease
	31 (55.3%) Infants (< 1 year)

Type of cannulas	70 (68%) 2 Fr 6 cm
	33 (32%) 3 Fr 8 cm
N° attempts	1 – 81.6%
	2 – 12.6%
	>2 – 5.8%
Sedation for insertion	43% YES
	57% only EMLA
Mean dwell time	5 days
Elective removal	81 (78%)
Complications (13.5%)	3 Dislocation (2.9%)
	5 Malfunction/Occlusion (4.8%)
	6 Infiltration/Extravasation (5.8%)
Upgrade Central Access	8 change of indication (7.7%)
	3 after complication
Inserted by PICU Nurse	43 (41%)

ELECTIVE REMOVALS AT THE END OF THERAPY

78%



CONCLUSION

Mini-midline catheters represent a safe and effective intermediate venous access option in pediatric patients, offering longer dwell times than peripheral cannulas and reducing the need for repeated venipunctures. This large case series supports their clinical use and underscores the importance of adequate operator training to ensure safety and success. These findings advocate for the integration of mini-midlines into pediatric vascular access protocols.



Believe in
mini-midlines!

