



Complication Associated with PICC, A Survey

Mrs.Priya Anil Pawar Nurse C CVAD UNIT Actrec ,Tata Memorial Centre India



INTRODUCTION

Peripherally inserted central venous catheter (PICCs) facilitates delivery of systemic treatment in cancer patients requiring treatment for prolonged period. Catheter were inserted by trained nursing staff in a nurse led PICC Clinic. Early identification and prompt intervention will help in better outcomes. We report here the complication in patients with PICC.



AIM

- ❖ To evaluate rates and nature of PICC related complication from insertion to removal.

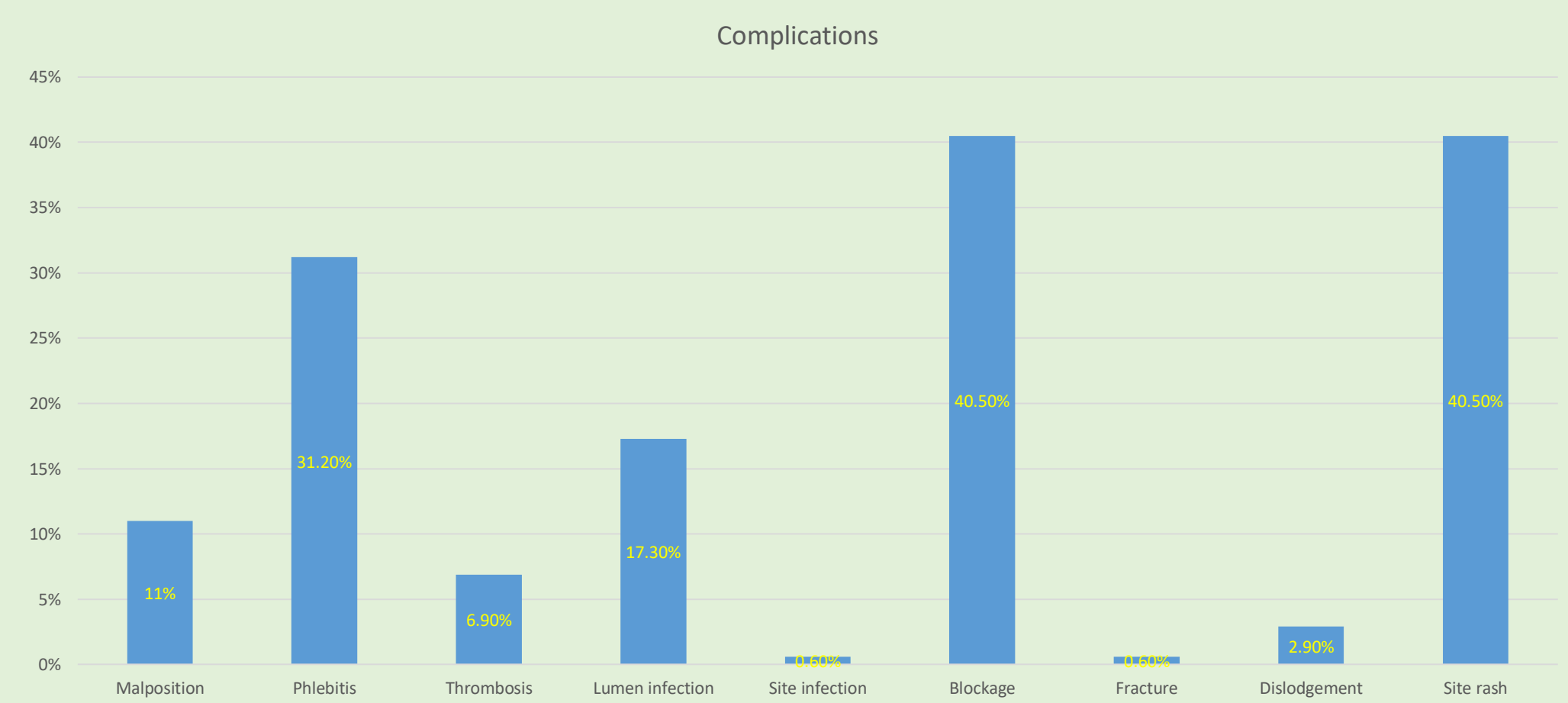
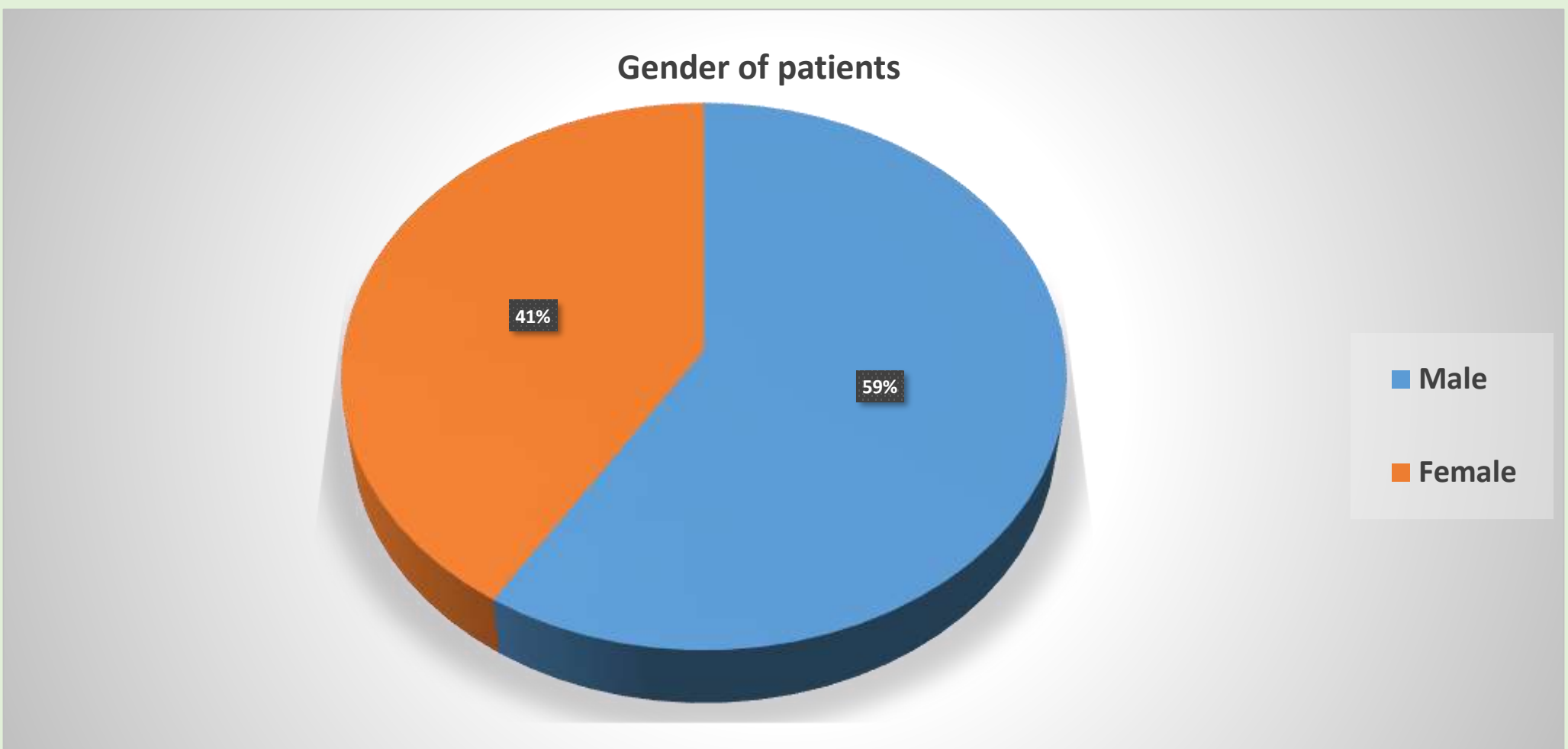
METHODS

- **Design** : Retrospective study.
- **Sample size** : 493
- **Tools** : Observational Checklist.
- **Setting** : Tertiary cancer care center.
- **Data analysis** : Descriptive and inferential statistics.
- **Inclusion criteria** : Patients who had PICC insertion in nurse led Clinic between January 2019 to December 2022.

DATA COLLECTION

- A retrospective study was undertaken for all patients with PICC undergoing treatment at our territory care Centre. An observational checklist was maintained & all patients were assessed for any complication.
- The duration of catheterization was calculated as the difference between the date of insertion and the date of removal. This date was handled in the analysis like a continuous quantitative variable.
- **Complication were categorized as :-**
- **Malposition , Phlebitis, Thrombosis, Lumen infection, Site infection, Site rash, Blockage, Fracture and Dislodgement**

Results



Blockage (40.50%) and site rash (40.50%) were the dominant complications found after PICC insertion.

For blockage Inj. Urokinase lock for 24hrs were used as intervention and for site rash alcohol and povidine iodine 10% for cleaning and Betnovate N for local application were used.

Treatment regime change (17%), lost to follow up (43%) and request for removal (2.5%), median duration from catheter insertion to infection was 37.5 days (4-131 days).

Nursing Implications

- This study will provide baseline data for further research.
- This study will help in formation of SOP, policy and protocol.
- This will improve quality of nursing care.
- This will add to current evidence based practices of Complication associated with PICC.

Conclusions

- In our center complications are lower than most published data. We conclude that Nurse led PICC clinics using traditional method, can be successful, especially in low income countries where resources for advanced techniques are not easily available.

References

1. O'Grady NP, Alexander M, Burns LA, Dellinger EP, Garland J, Heard SO, et al. Guidelines for the prevention of intravascular catheter-related infections. *Am J Infect Control*. 2011;39(4 Suppl 1):S1–34.
- Vidal V, Muller C, Jacquier A, Giorgi R, Le Corroller T, Gaubert JY, et al. Prospective evaluation of PICC line related complications. *J Radiol*. 2008;89(4):495–8.
- Galvez R. Accesos venosos centrales y complicaciones In: Andresen M, editor. *Manual de medicina intensiva*. Santiago de Chile: Mediterráneo; 2010. pp. 27–32.
- Schiffer CA, Mangu PB, Wade JC, Camp-Sorrell D, Cope DG, El-Rayes BF et al. Central venous catheter care for the patient with cancer: American Society of Clinical Oncology clinical practice guideline. *J Clin Oncol*. 2013;31(10):1357–70. pmid:23460705.
- AskMayoExpert. Central venous catheter. Rochester, Minn.: Mayo Foundation for Medical Education and Research; 2018.
- Heffner AC, et al. Overview of central venous access. <https://www.uptodate.com/contents/search>. Accessed July 2, 2019.
- Sousa B, Furlanetto J, Hutka M, et al. Central venous access in oncology: ESMO clinical practice guidelines. *Ann Oncol*. 2015; **26**: 26-v168. doi:[10.1093/annonc/mdv296](https://doi.org/10.1093/annonc/mdv296)
- O'Grady NP, Alexander M, Burns LA, et al. Guidelines for the prevention of intravascular catheter-related infections. *Clin Infect Dis*. 2011; **52**:e169-170.