



INTRODUCTION

Cervical Cancer (CC) is the third most common cancer in the world. Incidence rate for cervical cancer in Australia is 7.1 cases per 100,000 females as per 2022 data. Programs designed to reduce cervical cancer morbidity and mortality are based on the early detection of premalignant lesions. Improved cervical cytology and human papillomavirus (HPV) screening methods have decreased cervical cancer incidence. The aim of diagnostic colposcopy following an abnormal cervical screening test is to assess the nature, severity, and extent of this abnormality. Colposcopy requires mapping and typing of the transformation zone (TZ), identification of any visible abnormalities and targeted biopsies of abnormal areas to exclude invasive disease.

MATERIALS & METHODS

This study included 108 women who underwent colposcopy for abnormal cervical cytology between June 2022 and May 2023 at Hornsby Ku-ring-gai Hospital. Out of 108 women, cervical biopsy was performed in 48 cases based on colposcopy findings. The patient's cervical cytology results, Colposcopy diagnoses, Cervical pathology results were recorded. LBC negative patients were further categorised to HPV 16/18 & Non - HPV 16/18 types.

Statistical analysis

The data on CST LBC results, colposcopy impressions, and histology of biopsy specimens were presented using frequency and contingency tables and bar plots. The significance of the association between CST LBC result and colposcopy impression with histology was assessed using a weighted kappa measure based on linear and quadrant weights. All the statistical tests were performed at a 05 level of significance. The statistical analysis was performed in STATA, version 17.0

RESULTS:-

Significant association was observed between both CST LBC & Colposcopy findings when compared to biopsy results. There was moderate level of agreement between CST LBC results & biopsy findings. The agreement level between colposcopy impression and biopsy findings was low.

Declaration- No conflict of interest

CONCLUSION

Even though the agreement level between colposcopy impressions and biopsy findings was lower as compared to that between CST LBC result & Biopsy findings, there was significant independent association of each screening test with biopsy findings. Correlation of CST LBC result and colposcopy with histopathology, as the diagnostic tool in this study, was significant ($p < 0.001$). Combination of cytology and colposcopy helped in successful identification of pre-malignant lesions.

However, there was low evidence to suggest that the agreement between colposcopy impressions and biopsy findings was comparable to that observed with CST LBC results and biopsy findings. This may be secondary to variation in the experience and skill levels of clinicians performing colposcopies. Another limitation of this study was that the sample size was small. Future research endeavors should aim for larger sample sizes and consider covariate adjustments for more robust conclusions.

REFERENCES

- 1) Australian Institute of Health and Welfare (2022). Cervical Screening Programme monitoring report 2022. Australian Government, accessed 01 December 2023. 10.25816/xz5f-vz10
- 2) Landis JR. Koch GG. The measurement of observer agreement for categorical data. *Biometrics*. 1977;33: 159-174.
- 3) Ples L, Radosa JC, Sima RM, Chicea R, Olaru OG, Poescu M. The Accuracy of Cytology, Colposcopy and Pathology in the Detection of Precancerous Cervical Lesions. *Diagnostics (Basel)*. 2023;13(8): 1947. doi : 10.3390/diagnostics12081947
- 4) Boicea A, Patrascu A, Surlin V, Iliscu D, Schenker M, Corbulea C. Correlations between colposcopy and histologic results in cervicographically directed biopsy in cervical precancerous lesions. *Revista de Ginecologie si Obstetrica*. 2012;53 (3 Suppl):735-41
- 5) International Journal of Reproduction, Contraception, Obstetrics and Gynecology Gupta P et al. Int J Reprod Contracept. 2020 Jul;9 (7) : 2729-2735
- 6) Benedet JL, Matisic JP, Bertrand MA. An analysis of patients from the British Columbia cytology - colposcopy program. *Gynaecol Oncol*. 2004;92 (1) : 127-34
- 7) Tamiolakis D, Kalloniatiou M, Lambropoulou M, Kambouris A, Tsopelas A, Daskalakis G, et al. Contribution of colposcopy and cytology in cervical pathology. *Arch Gynecol Obstet*. 2005;273:39-42
- 8) Singh V, Das DK, Murthy NS, Luthra UK, Choudhary A. Observations in precancerous and early cancerous lesions of the uterine cervix. *J Obstet Gynaecol India*. 1989;39:392.
- 9) Saraiya UB, Lulla M. Role of colposcopically directed biopsy in the management of early cervical neoplasia. *Obstet Gynaecol India*. 1986;36 (41) : 770-7

ACKNOWLEDGEMENT

I highly acknowledge the contributions & support of Co-Authors Assoc. Prof Ajay Vatsayan & Mr Venkatesh Bhagavath in completing this Audit.

