



STUDY ON CERVICAL PAP SMEAR IN A TERTIARY CARE CENTER.

Obstetrics & Gynaecology

Dr. K. Naga Sai Nishma

Postgraduate Department Of Obstetrics And Gynaecology, Alluri Sitarama Raju Academy Of Medical Sciences Eluru, West Godavari District Andhra Pradesh 534005 India

Dr. D. Murmu

Professor Department Of Obstetrics And Gynaecology, Alluri Sitarama Raju Academy Of Medical Sciences Eluru, West Godavari District Andhra Pradesh 534005 India

Dr. K. Vandana

Head Of The Department Department Of Obstetrics And Gynaecology , Alluri Sitarama Raju Academy Of Medical Sciences Eluru , West Godavari District Andhra Pradesh 534005 India

ABSTRACT

Background: Cervical cancer is the 2nd most common cause of cancer related deaths among women in developing countries. Mortality due to cervical cancer is also an indicator of health inequalities, as 86% of all deaths due to cervical cancer are in low- and middle-income countries. Every year in India, 122,844 women are diagnosed with cervical cancer and 67,477 die from the disease. India has a national programme for cancer since 1975, when the emphasis was on equipping premier cancer institutions. In 2010, cancer control became a part of a more comprehensive, larger programme on non-communicable disease called National Programme for Prevention and Control of Cancer. **Materials And Methods:** It is a hospital-based observation study, which was conducted in the Department of Obstetrics & Gynaecology at Alluri Sitarama Raju Academy of Medical Sciences Eluru West Godavari district, over a period of 1 year from March 2022 to March 2023. A total of 531 women attending gynaecology OPD who consented to participate in the study were included. After clinical and gynaecological examination pap smear was obtained by conventional method using an Ayre's spatula and endocervical brush. Pap smear is fixed in 95% isopropyl alcohol and stained with PAP stain. Pap smear is interpreted as per "The Bethesda system of cervical cytology" 2014. **Result:** In our study most of the women had pap test opportunistic screening, when they visited Gyn OPD. Only 6 women came for pap smear screening on voluntary basis. All women in our study were married with monogamous relationship. The mean age of the participants was 39.49 years. Most common symptom was vaginal discharge. Most common clinical finding was healthy looking cervix (214). Most common Pap cytology was NILM 510 (96.05%). Epithelial cell abnormality constituted 21 (3.95%). Unsatisfactory smears 10 (1.8%). **Conclusion:** Preinvasive and malignant lesions of cervix can be easily picked up with simple pap smear test which is cost effective.

KEYWORDS

INTRODUCTION:

Cervical cancer is the 2nd most common cause of cancer related deaths among women in developing countries. Mortality due to cervical cancer is also an indicator of health inequalities, as 86% of all deaths due to cervical cancer are in low- and middle-income countries. Every year in India, 122,844 women are diagnosed with cervical cancer and 67,477 die from the disease. India has a national programme for cancer since 1975, when the emphasis was on equipping premier cancer institutions. In 2010, cancer control became a part of a more comprehensive, larger programme on non-communicable disease called National Programme for Prevention and Control of Cancer. Keeping in view the topographical conditions and high incidence of cervical cancer, the present study is an attempt to screen the women attending Gynaecology OPD for the cervical cancer using pap smear.

MATERIALS AND METHODS

It is a hospital-based observation study, which was conducted in the Department of Obstetrics & Gynaecology at Alluri Sitarama Raju Academy of Medical Sciences Eluru West Godavari district, over a period of 1 year March 2022 to March 2023.

A total of 531 women attending gynaecology OPD who consented to participate in the study were included.

After clinical and gynaecological examination pap smear was obtained by conventional method using an Ayre's spatula and endocervical brush. Pap smear is fixed in 95% isopropyl alcohol and stained with PAP stain. Pap smear is interpreted as per "The Bethesda system of cervical cytology" 2014.

Inclusion criteria

- Age > 21 yrs.
- Women with c/o white discharge.
- Post coital bleeding
- Intermenstrual bleeding
- Postmenopausal bleeding.
- Multiple sexual partners.
- Unhealthy looking cervix.
- Cervical lesions that bleed on touch.

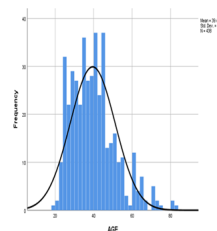
- Smokers.
- Women without any symptoms were screened.

Exclusion criteria

- Women not willing to participate in the study.
- Treated cases of cancer cervix.
- Known cases of cancer cervix.
- Women who are pregnant.

RESULT

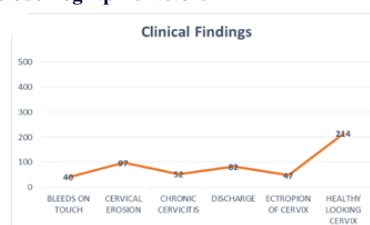
A total 531 women who attended Gyneac OPD, Pap smear was taken and studied.



Age distribution

Mean age of the study participants was 39.49 (11.68) years, Median was 38.00, Standard deviation was 11. Range is 64 years, Minimum was 19, Maximum was 83. Youngest participant was 19 years old and eldest was 83 years old.

Table 2: sociodemographic factors





Sociodemographic factors

Age group

22-30 -156(29.3%),
31-45 – 267 (50.8%),
46-65 – 108 (20.33%)

Parity

Nulliparous -6
Primipara-27
Multipara-498
Marital Status
Unmarried – 0
Married -531

Educational status

Uneducated – 227
Metric – 208
Higher secondary – 74
Graduate – 22

Contraception usage

None – 193
Barrier -116
Tubal ligation – 184
Ocp – 7
Others - 10

Cytology results on pap smears

NILM (Negative for Intra epithelial lesion or malignancy. N = 510(96.05%)
Nilm – reactive -393 (74%)
Nilm– inflammatory- 71 (13.37%)
Nilm – atrophic- 22 (4.14%)
Nilm – trichomonas vaginalis – 6 (1.12%)
Nilm– candida – 5 (0.94%)
Nilm – bacterial vaginosis – 13 (2.44%)

Epithelial cell abnormality

Ascus – 5 (0.94%)
Lsil – 13 (2.44%)
Hsil – 2 (0.37%)
Squamous cell carcinoma – 1 (0.2%)

Most common symptom was vaginal discharge

- Most common clinical finding was healthy looking cervix (214).
- Most common Pap cytology was NILM 510 (96.05%)
- Epithelial cell abnormality constituted 21 (3.95%)
- Unsatisfactory smears 10 (1.8%)
- In our study most of the women had pap test opportunistic screening, when they visited Gyn OPD.
- Only 6 women came for pap smear screening on voluntary basis
- All women in our study were married with monogamous relationship.
- The mean age of the participants was 39.49 years.

DISCUSSION

It is a well-known fact that the incidence of cervical cancer has been reduced dramatically after the introduction of screening programmes [12]. Preventive measures can be primary or secondary. Primary modalities include changes in sexual behavior and human papilloma virus vaccination. Secondary prevention of cervical cancer includes visual inspection of cervix, cervicospoty, HPV testing and cytology. Pap test aimed at identification of premalignant and malignant lesions, which may need follow treatment. Pap smear based screening methods have played a pivotal mode in reducing cervical cancer incidence and mortality up to 50-70% in developed countries.

The percentage of epithelial abnormalities is about 2.3% to 6.6%, in the US, 1.6% to 7.9% in the Middle East, 1.87 to 5.9% in India and 3.95% in the present study.

Cervical cancer is most widely screened cancer in both high- & middle-income countries. Population based cervical cytology screening programmes have been offering pap testing every 3 to 4 yrs. These have reduced cervical cancer incidence and mortality up to 80% in developed countries in the last 5 decades. Cervical cancer is on the declining trend in India according to population registries.

In the present study most of the women had pap test for the first time in their life. None of them knew that cervical cancer can be detected in precancerous state by pap test.

All women in the present study were married with monogamous relationship. The mean age of the participants was 39.49 years, range is 64, youngest participant being 19 years and oldest being 83 years old.

It is recommended that the women should have at least one smear test before the age of 45 yrs. Screening for cancer cervix with pap smear is an important part of preventive health care of women.

In the present study, higher number of LSIL has been observed in younger women in whom it may lead to cancer cervix if no proper treatment has been provided at an early stage. However, no HSIL was observed in any age group, and this might suggest an active host immune response that has prevented the conversion of low-grade to high-grade lesions. This highlights the need to follow up the screening program to understand the factors responsible for the transformation of abnormal cells to high-grade lesions and eventually lead to invasive carcinoma cervix.

CONCLUSION

Preinvasive and malignant lesions of cervix can be easily picked up with simple pap smear test which is cost effective. The Epithelial cell abnormality was found to be 3.95% of all the women screened in our set up. Thus, the community should be enlightened about pap smear test, in developing countries like INDIA.

REFERENCES

1. Sreedevi, R. Javed, A. Dinesh Epidemiology of cervical cancer with special focus on India. *Int J Women's Health*, 7 (2015), pp. 405-414
2. A. Thakur, B. Gupta, A. Gupta, R. Chauhan Factors for cancer cervix among rural women of a hilly state: a case-control study *Indian J Public Health*, 59 (2015), pp. 45-48
3. T. Nayir, A.R. Okyay, E. Nizlican, H. Yesilyurt, M. Akbaba, B. Ilhan, et al. Cervical cancer screening in an early diagnosis and screening centre in Mersin, Turkey. *Asian Pac J Cancer Prev*, 16 (2015), pp. 6909-6912
4. P.R. Kulkarni, H. Rani, M.G. Vimalambike, S. Ravishankar Opportunistic screening for cervical cancer in tertiary hospital in Karnataka, India. *Asian Pac J Cancer Prev*, 14 (2013), pp. 101-105
5. E. Barouti, F. Farzaneh, A. Sene The pathogenic micro-organism in papanicolaou vaginal smears and correlation with inflammation. *J Family Reproduct Health*, 7 (2013), pp. 23-27
6. C.P. Padmini, N. Indira, R. Chaitra, P. Das, B.C. Girish, K.M. Nanda, S.N. Basu Cytological and colposcopic evaluation of unhealthy cervix. *J Evid Med Healthcare*, 2 (2015), pp. 6920-6927
7. Mulay K, Swain M, Patra S, Gowri Shankar S. Comparative study of cervical smears in an Urban hospital in India and a population-based screening program in Mauritius. *Indian J Pathol Microbiol* 2009; 52:34-7.
8. Ferlay J, Shin H.R, Bray F, Forman D, Mathers C, and Parkin D.M. et al. - Estimates of Worldwide burden of cancer in 2008 GLOBOCAN. *Int J Cancer*. 2010; 127:2893-917.
9. Ferlay J, Soerjomataram I, Dikshit R, Esser S, Mathers C, Rebelo M, et al. Cancer incidence and mortality worldwide: Sources, methods and major patterns in GLOBOCAN 2012. *Int J Cancer*. 2015; 136:E359-86.
10. Sreedevi A, Javed R, Dinesh A. Epidemiology of cervical cancer with special focus on India. *Int J Women's Health*. 2015; 7: 405-14.
11. Patel M.M, Pandya A.N, Modi J. Cervical pap smear study and its utility in cancer screening, to specify the strategy for cervical cancer control. *N J Comm Med*. 2011; 2(1):29-31.
12. Hande Celik Mehmetoglu, Ganime Sadikoglu et al. Pap smear screening in the primary health care setting: A study from Turkey. *N Am J Med Sci*. 2010; 2:1-28.
13. Pradhan B, Pradhan S.B, Mittal V.P. Correlation of Pap smear findings with clinical findings and cervical biopsy. *KUMJ*. 2007; 5:461-7.
14. Verma A, Verma S, Vashist S, Attri S, Singhal A. A study on cervical cancer screening in symptomatic women using Pap smear in a tertiary care hospital in rural area of Himachal Pradesh, India. *Middle East Fertility Society Journal*. 2017; 22:39-42.
15. P. Vijaya Lakshmi, S.R. Sree Gouri. Study and analysis of 200 cervical Papa smears in our hospital. *IJCMR*. 2016; 3:2787-9. Sachan P.L, Singh M, Patel M.L., Sachan R. A study on cervical cancer screening using Pap smear test and clinical correlation. *Asia Pac J Oncol Nurs*. 2018; 5:337-41.
16. Bamanikar S.A, Baravkar D.S, Chandanwale S.S, Dapkekar P. Study of Cervical Pap smears in a tertiary hospital. *Indian Medical Gazette*. 2014; 250-4.
17. International Agency for Research on Cancer and World Health Organization [Internet]. GLOBOCAN 2012: Estimated cancer incidence, mortality and prevalence worldwide in, 2012. [cited 2015 Aug 12] Available from: <http://www.globocan.iarc.fr>.
18. Human Papillomavirus and Related Diseases Report [cited 2015 December 23]. Available from www.hpvcentre.net/statistics/reports/IND.
19. Sankaranarayanan R, Nene BM, Dinshaw K, Rajkumar R, Shastri S, Wesley R et al. Early detection of cervical cancer with visual inspection methods: a summary of completed and ongoing studies in India. *Salud Publica Mex*. 2003; 45:399-407.

20. Ali F, Kuelker R, Wassie B. Understanding cervical cancer in the context of developing countries. *Ann Trop Med Public Health* [serial online] 2012. [Cited 2015 Dec 22]; 5:3-15. Available from: <http://www.atmph.org/text.asp?2012/5/1/3/92871>.
21. Denny L. The prevention of cervical cancer indeveloping countries. *BJOG*. 2005; 112:1204-12.
22. Adi DE, Tank PD. Milestones George Papanicolaou and the cervicovaginal smear. *J ObstetGynecology India*. 2009; 59(4):299-300.
23. Gaash B, Kausar R, Bhan R, Bahir S. Reproductive tract infections in Kargil: A community based study. *Heal PopulPerspect*. 2005; 28(1):1-8.
24. Globacon. Cancer incidence mortality and prevalence in India, 2002.
25. Kulkarni PR, Rani H, Vimalambike MG, Ravi Shankar S. Opportunistic screening for cervical cancer in a tertiary hospital in Karnataka, India. *Asian Pac J Cancer Prev*. 2013; 14:5101-5.
26. Satija A. Cervical Cancer in India. South Asia Centre for Chronic Disease. [Last accessed on 2014 Feb 16]. Available from: http://www.sanecd.org/uploads/pdf/cervical_cancer.pdf.
27. Arbyn M, Castellsague X, de Sanjose S, Bruni L, Saraiya M, Bray F et al. Worldwide burden of cervical cancer in 2008. *Ann Oncology*. 2011; 22:2675-86.
28. Summary chapter: IARC Working Group on Cervical Cancer Screening. In: Hakma M, MillerAB, DayNE, editors. *Screening for Cancer of the Uterine Cervix*.
29. Department of Cytology and Gynecological Pathology, Post Graduate Institute of Medical Education and Research, Chandigarh I. *Guidelines for Cervical Cancer Screening Programme, 2006*. Available at: http://screening.iarc.fr/doc/WHO_India_CCSP_guidelines_2005.pdf.