www.jmscr.igmpublication.org
Impact Factor 5.84
Index Copernicus Value: 83.27
ISSN (e)-2347-176x ISSN (p) 2455-0450
crossref DOI: https://dx.doi.org/10.18535/jmscr/v5i7.172

IGM Publication
Journal Of Medical Science And Clinical Research
An Official Publication Of IGM Publication

Feasibility and use fullness of VIA-VILI in Gynae OPD for Extended Gynecologic Examination

Authors
Naik Meena MD MRCOG[1], Ratnani Rekha MD[2]
[1]Assistant Professor, Department of Obstetrics and Gynaecology, Chandulala Chandrakar Memorial Medical College, Durg, Chhattisgarh
[2]Professor and HOD, Department of Obstetrics and Gynaecology, Chandulal Chandrakar Memorial Medical College, Durg, Chhattisgarh

Abstract
Cervical cancer is the leading cause of cancer related death in developing countries .India has 1/5th of global burden of cervical cancer .it is majorly due to lack of screening facilities in developing countries. VIA /VILI has been studied for population screening in various studies and found to have very high sensitivity for detection of cervical pre-invasive lesions .We studied the feasibility and usefulness of VIA /VILI as a part of routine extended gynaec examination in OPD setup for all women coming to gynae OPD and its role in detection of preinvasive and invasive cervical lesions.

Introduction

Cervical cancer is the leading cause of cancer related death in developing countries .India has 1/5th of global burden of cervical cancer .it is majorly due to lack of screening facilities in developing countries .VIA /VILI has been studied for population screening in various studies and found to have very high sensitivity for detection of cervical pre-invasive lesions. We studied the feasibility and usefulness of VIA /VILI as a part of routine extended gynaec examination in OPD setup for all women coming to gynae OPD with various complaints and its role in detection of preinvasive and invasive cervical lesions.

Aims and Objectives

To evaluate cervix using visual inspection with 5% acetic acid (VIA) and Lugol's iodine (VILI) as an extension of gynecologic examination for identification of premalignant and malignant lesions of cervix

Methods

This is a cross sectional Study conducted at CCM medical college hospital, bhilai CG, in gynae OPD between jan 2016 to December 2016. 3000 females of reproductive age group were studied. VIA /VILI was done for all women coming to gynae OPD as a part of extended routine gynaec examination. all patients coming to gynae OPD with any complaint were subjected to PS examination after history. During PS examination 5 % freshly prepared Acetic Acid was applied with help of a cotton swab on cervix. Distinct, well-defined, dense aceto white areas in the transformation zone was considered as VIA

positive .after that lugols Iodine was applied and yellow or orange areas were considered VILI positive while brown areas were VILI negative positive cases were counseled and advised colposcopy and guided biopsy Or VIA guided biopsy.

Materials used were the instruments routinely used in gynae OPD. either Sims or cusco's speculam, freshly prepared 5 % acetic acid ,lugols iodine and cotton swabs

All VIA/VILI positive women detected in OPD had colposcopy and /or biopsy of suspicious lesions and correlated with histopathology

Observations

3000 patients coming to gynae opd with various complaints were screened with VIA/VILI out of that 712 patients were positive on either or both tests. These patients were counseled for colposcopy /VIA with guided biopsy .524 patients underwent biopsy.

132 were positive for CIN on biopsy .66 patients were diagnosed as invasive cervical cancer

Out of which 58 had early stage disease and underwent radical hysterectomy and 8 patients were advanced stage and were referred for radiotherapy.

326 patients had chronic cervicitis

We also detected 5 cases of vulval cancer; out of which two had both cervical and vulval cancer both. one had invasive cervical cancer as well as invasive vulval cancer and underwent radical hysterectomy with radical vulvectomy. other had VIN 3 with focal microinvasion with CIN 2 and underwent simple vulvectomy with lap hysterectomy.

Table 1: Total patients screened –observations

	Total no .	% of total
Total screened	3000	
VIA +	712	23.7%
Biopsy done	524	17.4%
Chronic cervicitis	326	10.8%
CIN	132	4.4%
CIN 1	82	2.73%
CIN 2	36	1.2%
CIN 3	14	0.46%
Ca cx	66	2.2%

Table 2 Age distribution of patients

Age group	VIA positive	Biopsy done	Chronic cervicitis	CIN 1	CIN 2	CIN 3	Ca Cx
20-30 yrs		20(3.8%)	10	6	4	0	1
30-40 yrs		112(20.7%)	82	12	15	1	4
40-50 yrs		273(50.5%)	178	53	15	8	19
>50 yrs		119(22.03%)	56	9	4	5	42
Total		524	326	80	38	14	66

Distribution according to parity

Nulliparous	3%
Para 1	10%
Para 2	32%
Para 3 and above	55%

Distribution according to urban /rural population

Urban	10%
Rural	90%

Socioeconomic status

Low	94%
Middle	14%
High	2%

Distribution according to presenting complaints of patients screened

Pain abdomen	85%
Abnormal Vaginal discharge	82%
AUB menorrhagia	70%
Intermenstrual bleeding	30%
Post coital bleeding	10%
Continous bleeding	20%
Post menopausal bleeding	30%
Asymptomatic (patient came for TT, or general non gynaec complaints)	20%

Discussion

According to WHO cervical cancer is the second most common type of cancer among women and is responsible for majority of cancer related deaths .>80% of these deaths are in developing countries

where there is no organised screening program .without any definite strategy and screening program this incidence and mortality due to cervical cancer is projected to rise by almost 25% in next 10 years

In spite of all the advances in cancer screening and treatment cervical cancer still continues to be a major public health problem in India and many developing countries .it is the leading cause of cancer related death globally .in India the incidence of cervical cancer is 134420 cases per year and mortality rate of 72825 cases in a year (2008 data) [1]

Many studies have shown evidence of the feasibility and cost effectiveness of screening and treatment approaches for prevention and early detection of cervical cancer .Various tests like PAP, HPV, LBC, etc are time consuming and also costly, out of reach of the 80 % population in developing countries who are also the high risk group .this has prompted many researchers to study VIA/VILI and it has been widely adopted and studied in both population based screening as well as institute based screening programs in various parts of the country. these studies have proven the efficacy of VIA /VILI as screening test with very high sensitivity. [2,3,4,5,,6,7,8,)]

A significant reduction in cervical cancer mortality was shown following a single round of screening with HPV testing or VIA screening in a randomized trial in India. [9,10] Studies have also shown the safety, feasibility, and efficacy of conservative treatments for pre-cancers. [11,12]

In the present study we evaluated the feasibility and usefulness of VIA./VILI as a routine test in gynae OPD for all women irrespective of their primary complaint as an extension of gynaecological examination in OPD.

Visual inspection with acetic acid (VIA) is a simple inexpensive test with moderate sensitivity and specificity for screening that can be done by trained health workers and paramedical staff [13]

An expert panel recommended to govt of India the use of VIA as the primary screening test to be performed by trained nurses or health workers in primary healthcare [14]

IARC manual provides complete guidance for the training of health workers in VIA (ref 18)and colposcopy and guided biopsy. [19]

VIA is feasible in many low resourse settings where it is difficult to initiate and sustain high quality cytology based or HPV based screening programs.

Inclusion of VIA based screening programs into national programs is already taking place in many low and middle income countries and the evaluation of its impact on the service delivery will largely determine the success of the program when introduced into routine healthcare. [15,16,17]

VIA is a simple and affordable screening test with acceptable sensitivity and specificity in the range 50-88.6% and 66.7-89.7%, respectively, in a research setting. [20]

We report 3 year experience of VIA /VILI done during routine gynaec exam for every women coming to the OPD as an extension of gynaecological exam and its feasibility and usefulness in detection of cervical precancer and cancer lesions as well as other lower genital tract lesions .in a rural population where no organised screening program existed and with introduction of this simple measure we have been able to downstage cervical cancer from stage ¾ to early stage and CIN With no added cost and no additional infrastructure and personel.

In community based VIA screening with help of health workers the burden of bringing the patients to hospital for treatment and follow up lies with the health personels who are screening hence increasing the cost of screening .we used the already existing system of partly govt and partly institute based community health workers to bring the patients to the hospital clinic for screening with no additional cost incurred on our screening program. Community health workers were asked to bring the patients to the screening clinic where it was done free of cost . we also screened women coming for TT ,Family planning procedures ,early pregnancy care and those coming for other non

gynaec problems .this increased the no of women screened .a screening clinic has been set up in gynae OPD where all women in their first visit are thoroughly evaluated by history examination and pelvic exam with VIA/VILI in same sitting .

If VIA /VILI is positive the women is subjected to cervical biopsy either colpo guided or VIA/VILI guided again under govt finance scheme (smart card) these women are then sent for the desired investigations and treatment for their primary complaints and followed up once the report of biopsy comes. Patient who do not turn up are called by either informing their health workers or telephonically to come for the treatment.

Women with chronic cervicitis and CIN 1 are given antibiotic treatment /cryotherapy if not responding to antibiotics. those with CIN 2/3 underwent LEEP or hysterectomy if any other gynae pathology detected and women is above 40 with family completed and cannot come for regular follow up .those with early stage invasive cancer underwent radical hysterectomy with pelvic node dissection. depending on histopath reprt then referred to state regional cancer centre for radiotherapy .those with advanced stage were referred to regional cancer centre for radiotherapy at the outset .these women were provide transport by the hospital to go to the regional radiotherapy centre.

With this approach only a few women needed to travel to long distance for radiotherapy .majority of women 90 % were managed at our centre itself by either cryo/LEEP/conisation/hysterectomy or radical hysterectomy. Follow up after radiotherapy is also being done at our institute hence inconvenience caused to patients is minimised.

Conclusion

Thus our observations suggest that just by doing simple VIA/VILI on all OPD patients as an extended gynae exam by simple OPD instruments and 5 % acetic acid we can detect CIN and invasive cervical cancers in early stage.

It not only increases the detection rate of CIN and ca cx in early stage but also helps us in decision making for patients who have other gynaec problems like AUB, fibroid whether to manage them conservatively with medical management or offer surgical treatment. hence it helps in treatment planning for gynaecological patients .thus with no added cost VIA /VILI screening can be added to routine gynaec examination in OPD by every gynaecologist. institutes can have a policy of screening every woman coming to OPD with VIA /VILI irrespective of their complaints .till the time the infrastructure and manpower for a systematic screening program is in place this simple extension of routine gynaec exam can make some difference along with efforts to get patients to the OPD and educate health workers in the importance of screening.

Early detection of ca cx and CIN and their treatment will eventually reduce burden of invasive cervical cancer detected in advanced stages when treatment is not feasible or curative.

This study was conducted in a institute catering to the rural population of Chhattisgarh where no screening exists and even treatment facilities for advanced invasive cervical are limited. hence with this approach and diagnosis in early stage and CIN treatment can be offered even by gynaecologists with some training in colposcopy ,LEEP, Cryotherapy and radical hystetrectomy .very few patients will then need to be referred to cancer centres for radiation treatment .this will reduce burden on the few radiotherapy units.

VIA ia a simple, cheap and can be easily adapted as an extension of routine gynaecological exam by every gynaecologist in their clinical practice .

References

1. Ferlay J, Shin HR, Bray F, Forman D, Mathers C, Parkin DM. Lyon: International Agency for Research on Cancer; 2010. [Last accessed on 2011 Nov 20]. GLOBOCAN 2008 v1.2, Cancer Incidence and Mortality Worldwide: IARC Cancer Base No. 10. Available from: http://globocan.iarc.fr .

2. Shastri SS, Dinshaw K, Amin G, Goswami S, Patil S, Chinoy R, et al. Concurrent evaluation of visual, cytological and HPV testing as screening methods for the early detection of cervical neoplasia in Mumbai, India. Bull World Health Organ. 2005;83: 186–94. [PMC free article] [PubMed]
3. Sankaranarayanan R, Wesley R, Thara S, Dhakad N, Chandralekha B, Sebastian P, et al. Test characteristics of visual inspection with 4% acetic acid (VIA) and Lugol's iodine (VILI) in cervical cancer screening in Kerala, India. Int J Cancer. 2003;106:404–8. [PubMed]
4. Bhatla N, Gulati A, Mathur SR, Rani S, Anand K, Muwonge R, et al. Evaluation of cervical screening in rural North India. Int J Gynaecol Obstet. 2009;105:145–9. [PubMed]
5. Sankaranarayanan R, Nessa A, Esmy PO, Dangou JM. Visual inspection methods for cervical cancer prevention. Best Pract Res Clin Obstet Gynaecol. 2012;26:221–32. [PubMed]
6. Ghosh P, Gandhi G, Kochhar PK, Zutshi V, Batra S. Visual inspection of cervix with Lugol´s iodine for early detection of premalignant and malignant lesions of cervix. Indian J Med Res. 2012;136:265–71.[PMC free article] [PubMed]
7. Sankaranarayanan R, Basu P, Wesley R, Mahe C, Keita N, Mbalawa CC, et al. IARC Multicentre Study Group on Cervical Cancer Early Detection. Accuracy of visual screening for cervical neoplasia: Results from an IARC multicentre study in India and Africa. Int J Cancer. 2004;110:907–13. [PubMed]
8. Arbyn M, Sankaranarayanan R, Muwonge R, Keita N, Dolo A, Mbalawa CG, et al. Pooled analysis of the accuracy of five cervical cancer screening tests assessed in eleven studies in Africa and India. Int J Cancer. 2008;123:153–60. [PubMed]
9. Sankaranarayanan R, Nene BM, Shastri SS, Jayant K, Muwonge R, Budukh AM, et al. HPV screening for cervical cancer in rural India. N Engl J Med. 2009;360: 1385–94. [PubMed]
10. Sankaranarayanan R, Esmy PO, Rajkumar R, Muwonge R, Swaminathan R, Shanthakumari S, et al. Effect of visual screening on cervical cancer incidence and mortality in Tamil Nadu, India: A cluster randomized trial. Lancet. 2007;370:398–406. [PubMed]
11. Sankaranarayanan R, Rajkumar R, Esmy PO, Fayette JM, Shanthakumary S, Frappart L, et al. Effectiveness, safety and acceptability of 'see and treat' with cryotherapy by nurses in a cervical screening study in India. Br J Cancer. 2007;96:738–43. [PMC free article] [PubMed]
12. Nene BM, Hiremath PS, Kane S, Fayette JM, Shastri SS, Sankaranarayanan R. Effectiveness, safety, and acceptability of cryotherapy by midwives for cervical intraepithelial neoplasia in Maharashtra, India. Int J Gynaecol Obstet. 2008;103:232–6. [PubMed]
13. Alliance for Cervical Cancer Prevention. New evidence on the impact of cervical cancer screening and treatment using HPV DNA tests, visual inspection, or cytology. Cervical Cancer Prevention Fact Sheet. 2009
14. Government of India and World Health Organization. Guidelines for cervical cancer screening program. Recommendation of the Expert Group Meeting held on 18-19 Nov 2005. 2006
15. [Last accessed on 2012 Mar 18]. Available form: http://www.cervicalcanceraction.org/comments/map-slideshow-via.php .
16. Nessa A, Hussain MA, Rahman JN, Rashid MH, Muwonge R, Sankaranarayanan R. Screening for cervical neoplasia in Bangladesh using

visual inspection with acetic acid. Int J Gynaecol Obstet. 2010;111:115–8. [PubMed]

17. Tamil Nadu Health Systems Project. [Last accessed on 2013 March 29]. Available from:http://www.tnhsp.org/screening-cervical-cancer-and-breast-cancer .
18. Sankaranarayanan R, Wesley RS. Lyon: IARC Press; 2003. A Practical Manual on Visual Screening for Cervical Neoplasia. IARC Technical Publication, 41.
19. Sellors JW, Sankaranarayanan R. Lyon: IACR; 2003. Colposcopy and treatment of cervical intraepithelial neoplasia: A beginners' manual.
20. Visual inspection with acetic acid for cervical cancer screening: Test qualities in a primary-care setting. University of Zimbabwe/JHPIEGO Cervical Cancer Project. Lancet. 1999;353:869–73. [PubMed]