AOGIN INDIA
E Newsletter

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The quarterly newsletter of Asia Oceania research organization on Genital Infections and Neoplasia - India

From the editor's desk

Dear Readers,

"With the new day comes new strength and new thoughts. ....."

The awareness about cervical cancer screening and HPV vaccination is increasing across the country among both clinicians and the public. As a result of this increased awareness, more and more screening opportunities are being organized. We believe, we must acknowledge the hard work done by our members towards imparting awareness for prevention of cervical cancer. We humbly request the members to share their activities, so that others go through them and get inspired to do the same in whatever way it is possible. In this issue we have brought an interesting review on Pocket Colposcopy by Dr Rashmi Bagga. In journal scan Dr Panchampreet Kaur has highlighted the conservative management of high grade lesions in younger women and Dr Srabani Mittal has contributed some interesting case scenarios in cervical cancer screening.

We hope that the readers would benefit from the various sections in this newsletter. We look forward to a proactive participation of all the members.

Happy reading!!

Dr Seema Singhal
AIIMS, Delhi

What's inside

Message From the President

Dr Abraham peeedicayil, Professor and Head Department of Gynae Oncology, CMC Vellore

Dear Colleagues,

Greetings!
Success is a journey, not a destination……..

AOGIN-India has been active in creating awareness about cervical cancer, screening and HPV vaccination. Many of our members are doing their bit in their own circle of influence. However, we could do much more as an organization if we interacted more with government and non-governmental policy makers. Policies at a national and state level to promote primary prevention, primary care, community health and family medicine seem to be neglected over tertiary and quaternary care. The health care industry is concerned only with profits as the bottom line and so who will do the not so profitable work? Despite all the great work being done, there is still a long way to go to achieve our dream of eliminating cervical cancer. Our annual meeting this year will be held in Kochi from 13th to 15th December. We are thankful to Anupama Rajababu and her team at Amritha who will be the hosts. See you all in Kochi.

Best wishes,

Abraham Peedicayil

POCKeT COLPOSCOPE- A NEWER NOVEL SPECULUM LESS COLPOSCOPE

Dr Rashmi Bagga[1], Dr Richa Arora[2]
[1]Professor, Dept of Obstetrics & Gynaecology, PGIMER, Chandigarh
[2]Senior Resident, Dept of Obstetrics & Gynaecology, PGIMER, Chandigarh

Cervical cancer is the second most common cancer among Indian women, with an estimated incidence of 96,922 new cases and 60,078 cancer related deaths each year.[1] The number is still rising despite availability of various screening methods and vaccination. This is a preventable cancer with a several years interval between its pre-cancerous stage and cancer. The pre-cancerous stage (cervical intraepithelial neoplasia or CIN) can be detected by screening women at intervals ranging from 3 to 5 years. Several screening options are available for cervical cancer: cytology, HPV-DNA testing and visual inspection after application of acetic acid (VIA) which has been tested worldwide. In a medium resource country like India, which lacks adequate infrastructure and trained staff, cytology and HPV testing are not feasible options. Therefore, alternative low-cost options like VIA and VILI (visual inspection of the cervix after application of Lugol's iodine), which can be performed by trained nursing and paramedical staff are advocated as per the WHO guidelines.[2] Screening can help in early diagnosis of a precancerous lesion and its subsequent management plus regular follow up are important to reduce burden of invasive disease and its associated morbidity.

The operational framework in India recommends a screen-and-treat approach using VIA in which the treatment is based on the screening test and does not requires histological confirmation.[2] However, the screen-and-treat approach has a few drawbacks which include the subjective nature of VIA as its results and interpretation is dependent upon the performer. There may be frequent false positive diagnosis leading to overtreatment, and this test has a poor performance in postmenopausal women as the squamo-columnar junction (SCJ) has receded within the endocervical canal.

Traditionally, colposcopy has been used as a diagnostic as well as a therapeutic tool for management of suspected cervical pre-cancer, but its role as a screening tool for population based screening programs is limited. In countries like India, where there is paucity of trained cyto-pathologists and colposcopists, limited quality assurance measures and lack of good quality accessible health care services, VIA remains the only viable mass screening option. In order to improve the quality of VIA, capturing images of the cervix during a VIA examination and their review by trained personnel, we may maintain a quality check on the health care workers. Many new devices have been developed which can record digital images of the cervix during a VIA. Some of these include- EVA COLPO, ForenScope MMS colposcope GYN and POCKeT colposcope.

The POCKeT colposcope is a handheld device developed by Duke University Researchers (USA). It is a low cost 'Point of Care' Tampon Digital Colposcope which may help overcome many limitations of the traditional colposcope. The POCKeT Colposcope has been designed to simulate a tampon. It has a length of about 140mm, outer diameter of 20mm, weighs less than 900gms and costs about $500. It comes with a 2 or 5 MP color CMOS camera with 3 to 5 lens elements which provides infinity focus and a back focal length of 3 to 4mm and in-built LEDs with white and green-light emitting diodes arranged in concentric illumination rings on the tip of the probe. The device has a USB- 2.0 interface by which it can be connected to a cell phone, tablet or computer, which also acts as power source thereby alleviating the need of direct electricity source or power adapter. It has comparable resolving power, color reproduction accuracy, minimal lens distortion and illumination when compared to other commercial colposcopes.[3]

The POCKeT Colposcope has an advantage that it can be used without any vaginal speculum in-situ, thereby alleviating unnecessary stress and fear of speculum examination in the women. A special inserter is designed to insert the POCKeT Colposcope. The channel of the inserter enables the insertion of cotton swabs and cytobrushes used during HPV and Pap smear collection, but these are of a small diameters (7mm).[4] The POCKeT Colposcope is shaped like a tampon and can easily be inserted in the vagina like a trans-vaginal ultrasound probe. Because of its slender design, the colposcope is positioned in such a way that the optical end is 30-40 mm away from the cervix, in contrast to the traditional colposcope which needs a working distance of 250-300 mm,

thereby obviating the need of complex high end optics and magnification. The images captured by the colposcope are transferred to the connected device- a smart phone, tablet or laptop from which they can be further transmitted to the tertiary centre for review by expert physician and further management and follow up accordingly. The images captured can also be stored and uploaded in database for future reference, quality control, training purpose and retrospective studies. This device makes a gynecological examination very comfortable for the women and after each use, it can be sterilized by immersion in bleach or hydrogen peroxide.

Various studies have been conducted to compare efficacy of portable colposcope with regular cervical cancer screening programs which have found reasonable image concordance and comparative diagnostic accuracy between the device and clinicians. In a study conducted in 3 different centres in the USA, Egypt and South America to compare POCKeT Colposcope with Standard-Of-Care Cervical cancer found a significant correlation between overall pooled image concordance between portable colposcope and standard colposcope and its pathological correlation.[5] It has also been evaluated in India in two cities (Cancer Institute Chennai- Institute of Cytology and Preventative Oncology and All India Institute of Medical Sciences, New Delhi)
Till now, the use of colposcopy as a tool for primary screening modality has been limited because of the cost factor, technical expertise and availability of expert colposcopists. However, the POCKeT colposcope allows a more women friendly, speculum free cervical cancer screening. It can reduce the training level required for community health workers and prevent false positive or negative screening results thus improving the efficacy of screening program. Over the time, the POCKeT Colposcope may even become a tool for self screening. This makes the POCKeT Colposcope an ideal device for use in primary health care setting and in low resource communities by providing greater screening access. It can help provide specialist care of tertiary level to community setting.

References:

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3- Asiedu MN, Agudogo J, Krieger MS, Miros R, Proeschold-Bell RJ, Schmitt JW, Ramanujam N. (2017). Design and preliminary analysis of a vaginal inserter for speculum-free cervical cancer screening. PLoS ONE. 12. 10.1371/journal.pone.0177782.

4- Lam CT, Krieger MS, Gallagher JE, Asma B, Muasher LC, Schmitt JW, et al. (2015) Design of a Novel Low Cost Point of Care Tampon (POCkeT) Colposcope for Use in Resource Limited Settings. PLoS ONE 10(9): e0135869. https://doi.org/10.1371/journal.pone.0135869

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JOURNAL SCAN

Dr. Panchampreet Kaur, New Delhi

Article 1

Outcomes of Conservative Management of High Grade Squamous Intraepithelial Lesions in Young Women
Marette H. Lee, Sarah J. Finlayson, Ksenia Gukova et al Outcomes of Conservative Management of High Grade Squamous Intraepithelial Lesions in Young Women in *Journal of Lower Genital Tract Disease* Volume 22, Number 3, July 2018

Background: Cervical cancer screening guidelines recommend cytology screening for women aged 21 to 69 years. However, the effectiveness of cervical cancer screening in women younger than 25 years is questionable due to low incidence of cervical cancer in them, high false-positive rate and spontaneous resolution of precancer lesions. Thus, there is a significant proportion of women younger than 25 years who undergo unnecessary treatment and therefore are also exposed to short and long-term risks of treatment. The current study was undertaken with the aim to determine the regression rate of Cervical intraepithelial neoplasia (CIN) 2 and 3 in women younger than 24 years, followed conservatively for up to 24 months.

Materials and Methods: A retrospective cohort study was conducted to examine outcomes of conservative management of CIN2+ in women younger than 24 years. The primary objective of this study was to determine rate of lesion regression and median time to regression in these women and secondary outcome was to determine patient characteristics and clinical factors associated with an increased chance of regression and determine patient adherence. Patients were only categorized as having regressed if they did not receive a LEEP.Women younger than 24 years at first visit; histologic diagnosis of CIN2+, with at least 1 follow up visit; and optimal conservative management (not treated for CIN 2 or CIN 3 until age of 24 years or until 24 months of follow-up, whichever occurred first) were included.

The women were advised conservative management if considered reliable for follow-up and otherwise, they were recommended to have a loop electrosurgical excision (LEEP). Women with adenocarcinoma in situ (AIS) discovered during follow-up were recommended to have an immediate LEEP. The observation protocol consisted of a colposcopic examination and at least one biopsy six monthly for up to 2 years or until age of 24 years (whichever occurred first), at which point a LEEP was recommended if CIN2+ persisted. Patients were discharged after at least 1 biopsy showing CIN1 or negative results.

Results : 224 young women were diagnosed with CIN2+ during the study period, 188 of these women were advised conservative management. 34 women (18.1% of 188) had no further follow-up and were excluded. So the final analysis was done in 154 patients. The most severe histological diagnoses were CIN2 in 99(64.3%), CIN3 in 51 (33.1%), and adenocarcinoma in situ in 4 (2.6%). Adenocarcinoma in situ was immediately treated. Overall, 85 (55.2%) women demonstrated lesion regression; 43 regressed to CIN1, and 42 regressed to negative biopsy. Of those with CIN2, lesion regressed in 74 women (74.7%), and in 11 women 21.6% with CIN 3. CIN 2, low grade referral Pap, and younger age predicted regression. Overall, 49 women (31.8%) were treated.The overall median time to regression was 14.6 months, and 10.8 months for women with CIN2. The median was not reached for CIN3, and last observation censored was at 52.7 months.

Conclusion : This study supports the practice of conservative management of young women who have CIN2. Although regression does occur in some women with CIN3, the safety and long-term results of conservative management in women with CIN 3 are not much known and this requires detailed discussion with the patient along with ensuring a dedicated follow up by the patient.

Article 2

Portable Pocket colposcopy performs comparably to standard-of-care clinical colposcopy using acetic acid and Lugol's iodine as contrast mediators: an investigational study in Peru

Mueller JL, Lam CT, Dahl D, Asiedu MN, Krieger MS, Bellido-Fuentes Y, Kellish M, Peters J, Erkanli A, Ortiz EJ, Muasher LC, Taylor PT, Schmitt JW, Venegas G, Ramanujam N. Portable Pocket colposcopy performs comparably to standard-of-care clinical colposcopy using acetic acid and Lugol's iodine as contrast mediators – an investigational study in Peru. *BJOG* 2018;125: 1321–1329

Background: Colposcopy-guided biopsy is the reference standard for diagnosing suspected precancerous lesions of the cervix and involves the use of a low-magnification microscope. However, colposcopes are expensive and available in only few centres making it inaccessible to many women who are actually at high risk for cervical cancer.

Objective: The goal of study was to develop a tele-colposcopy platform for primary-care clinics to improve screening sensitivity and access. A low-cost, portable Pocket colposcope was developed and its performance was evaluated in a tertiary healthcare centre in Peru.

Material and Methods: 200 women with abnormal cytology and/or HPV positivity were enrolled in the study. A Pocket colposcope was developed and latest version of same was used which weighed 250 g. This colposcope is used inside the speculum unlike traditional colposcopes which visualize cervix from outside the speculum. Pocket colposcope can be connected to a smartphone for easy visualization of images. The Pocket colposcope was disinfected between patient uses by submerging it in 0.0675 % bleach for 10 minutes at 25°C. Patients whose images were unreadable due to incorrect focussing of the device during the procedure and those whom pathology and/or images were missing were excluded from the study. Image quality as viewed by reviewers who were blinded to the type of colposcope used was scored as low, medium or high quality. Images were collected using acetic acid and Lugol's iodine as contrast agents. High image quality was defined when image is in focus and all the four quadrants of the cervix are visible. Medium image quality is the one which is slightly out of focus and most of the four quadrants are visible and low image quality is the one which is out of focus and most of the four quadrants of cervix are not visible. Biopsies were taken as per standard of care procedures. The physician diagnoses of the cervical images were compared with the pathology-confirmed diagnosis.

Results: Physician interpretation of images from the two colposcopes agreed 83.1% of the time. The average sensitivity and specificity of physician interpretation compared with pathology was similar for the Pocket (sensitivity = 71.2%, specificity = 57.5%) and standard-of-care (sensitivity = 79.8%, specificity = 56.6%) colposcopes. The percent agreement increased from negative (82.2%) to LSIL (82.6%) to HSIL+ (86.4%) image pairs. On comparison with another study where only acetic acid was applied to the cervix, results showed that addition of Lugol's iodine as a secondary contrast agent in this study improved the percent agreement between colposcopes for all pathological categories by up to 8.9% and the sensitivity and specificity of physician interpretation compared with pathology by over 6.0 and 9.0%, respectively.

Conclusion: The Pocket colposcope performance was similar to that of a standard-of-care colposcope when used to identify precancerous and cancerous lesions using acetic acid and Lugol's iodine during colposcopy examinations in Peru.

Clinical Pearls

Dr Srabani Mittal, Kolkata

Case 1:

1. A 35 years old 2nd gravida at 28 weeks of pregnancy presented with copious discharge per vagina. On speculum examination the cervix appeared unhealthy. She was subjected to colposcopy and below are her colposcopy images.

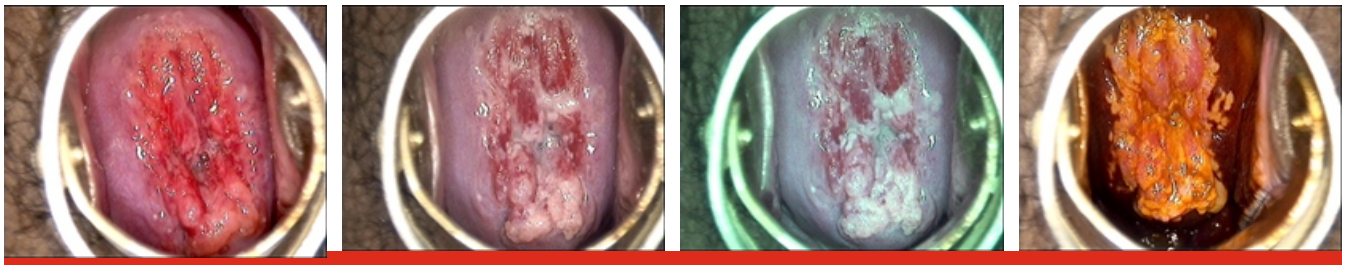


Fig 1

Questions:

1a. What are the colposcopic features and interpretation?

1b. What would be her further management?

Answers :

1a: Before application of acetic acid, the columnar epithelium appeared congested, hypertrophied and everted. There were no abnormal blood vessels. The polyp-like protrusions on the posterior lip (5-7 o'clock) appeared as raised white plaques (or pseudo polyps) after application of acetic acid. Patchy iodine negative areas were visible after application of acetic acid.

1b: Cervical punch biopsy was obtained from the raised white area. The histopathological examination reported cervical deciduosis.

Remarks: *Deciduosis in pregnancy can mimic a high grade disease on colposcopy. Careful colposcopic evaluation is necessary to avoid overdiagnosis and aggressive management. Biopsies from suspected CIN can be delayed to 6-12 weeks after delivery.*

Clinical Pearls

Dr Srabani Mittal, Kolkata

Case 2:

2. A 42 years old woman underwent screening by HC2 test and was detected to be screen positive. She was referred to colposcopy clinic for further evaluation. Following are her colposcopy images

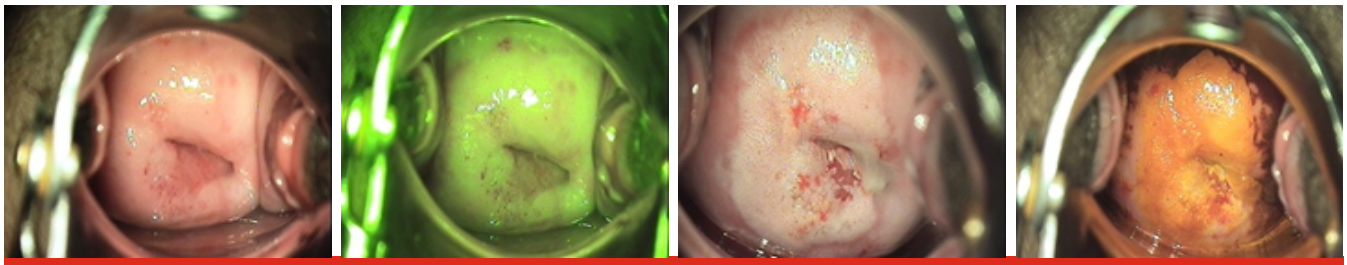


Fig 2

Questions:

2a. What is the colposcopy diagnosis?

2b. What is her management plan?

Answers :

2a: After application of normal saline, coarse punctations were visible on the posterior lip. On applying green filter, the punctations appeared more prominent and present almost all over the ectocervix. Application of acetic acid revealed a large circumferential dense acetowhite area with well demarcated margins and raised on the posterior lip (4-7 o'clock position). There was peeling of epithelium ('Rag sign') on posterior lip close to the external os (5-6 o'clock). The SCJ was not visible. After application of Lugol's Iodine, the acetowhite areas appeared bright mustard yellow in color. Colposcopic features corresponded to Grade 2 abnormal findings. The Swede score was 10 indicating presence of high grade disease.

2b: A type 3 excision was done with removal of transformation zone in one piece and with adequate clear margin of normal tissue. The post LLETZ histology report showed presence of microinvasive carcinoma (stage 1A1). The specimen margins were disease free.

Remarks: *Multiple punch biopsies are not reliable for diagnosis of suspected microinvasive carcinoma as the small tissues obtained may not be adequate enough to correctly assess the extent of the disease. A complete excision of the transformation zone with adequate clear margins is indicated for treatment of microinvasive carcinoma stage 1A1.*

CME on "Preventive aspects of Gynaecological Oncology"

CME on **"Preventive aspects of Gynaecological Oncology"** was organized by Asia Oceania Research Organization on Genital Infections and Neoplasia (AOGIN), India in association with Oncology Committee, The Bengal Obstetrics and Gynaecological Society on **Saturday, February 9, 2019 at Hotel De Sovrani, DD -21, DD Block, Salt Lake City, Sector-1, Kolkata -700064.**

A total of 126 doctors from in and around Kolkata attended the academic meet.

Dr Srabani Mittal spoke on "New Colposcopic Terminologies and its Clinical Relevance in Cervical Cancer Screening", Dr Jaydip Bhaumik spoke on "Ovarian Cancer Screening" and Dr Diptendra Kumar Sarkar spoke on "Breast Cancer Screening: Indian Problem and Solutions". This session was chaired by Dr Abinash Chandra Ray, Dr Subhash Chandra Biswas, Dr. Tulika Jha. The session highlighted all the aspects of screening.

A Case Discussion was organised. Moderators of this session were Dr M MSamsuzzoha and Dr Ranajit Kumar Mandal. Panelist were Dr Dibyendu Banerjee, Dr DebarshiLahiri, Dr KaustavBasu, Dr ManishaVernekar, Dr Shyamal Sett, Dr SrabantiHajra.

Dr SarithaShamsunder Kale gave a keynote address on "HPV Vaccines Myths and Facts" and Dr BhagyalaxmiNayak spoke on "VIN: Changing Trends in Pathogenesis and Management". This session was chaired by Dr Biman Kumar Chakrabarty, Dr Kusagradhi Ghosh.

After that, a Invited Video on Management of Cervical Neoplasia was shown by Dr SeemaSinghal, Dr Bindiya Gupta, Dr Nisha Singh and Dr Arunava Ray. This session was chaired by Dr Ashis Kumar Mukhopadhyay, Dr BiswajyotiGuha, Dr Narayan Jana.

Post lunch, **51st Dr Subodh Mitra Memorial Oration** was delivered by **Dr Abraham Peedicayil,** Prof & Head, Dept of Gynaecologic Oncology, CMC, Vellore and President, AOGIN India on **"My Tryst with HPV".** He broughtforth all the aspects of HPV test.

Lastly a multidisciplinary Tumor Board Discussion" was conducted. Moderators were Dr Dipanwita Banerjee, Dr Ramprasad Dey. Panelist were Dr Bhagyalaxmi Nayak, Dr Bindiya Gupta, Dr Chanchal Goswami, Dr Debarshi Lahiri, Dr Manas Chakrabarty, Dr Nisha Singh, Dr Saritha Shamsunder Kale, Dr Seema Singhal, Dr Srabanti Hajra.The interactive practical sessions in the CME were greatly appreciated by all the delegates.





2. Cytology clinic (AMWI) celebrated International Women's Week under the banner of Dr Avabai Mehta and Dr. Hilla Vakil donation to AMWI, Mumbai branch. Total 3 camps were held.

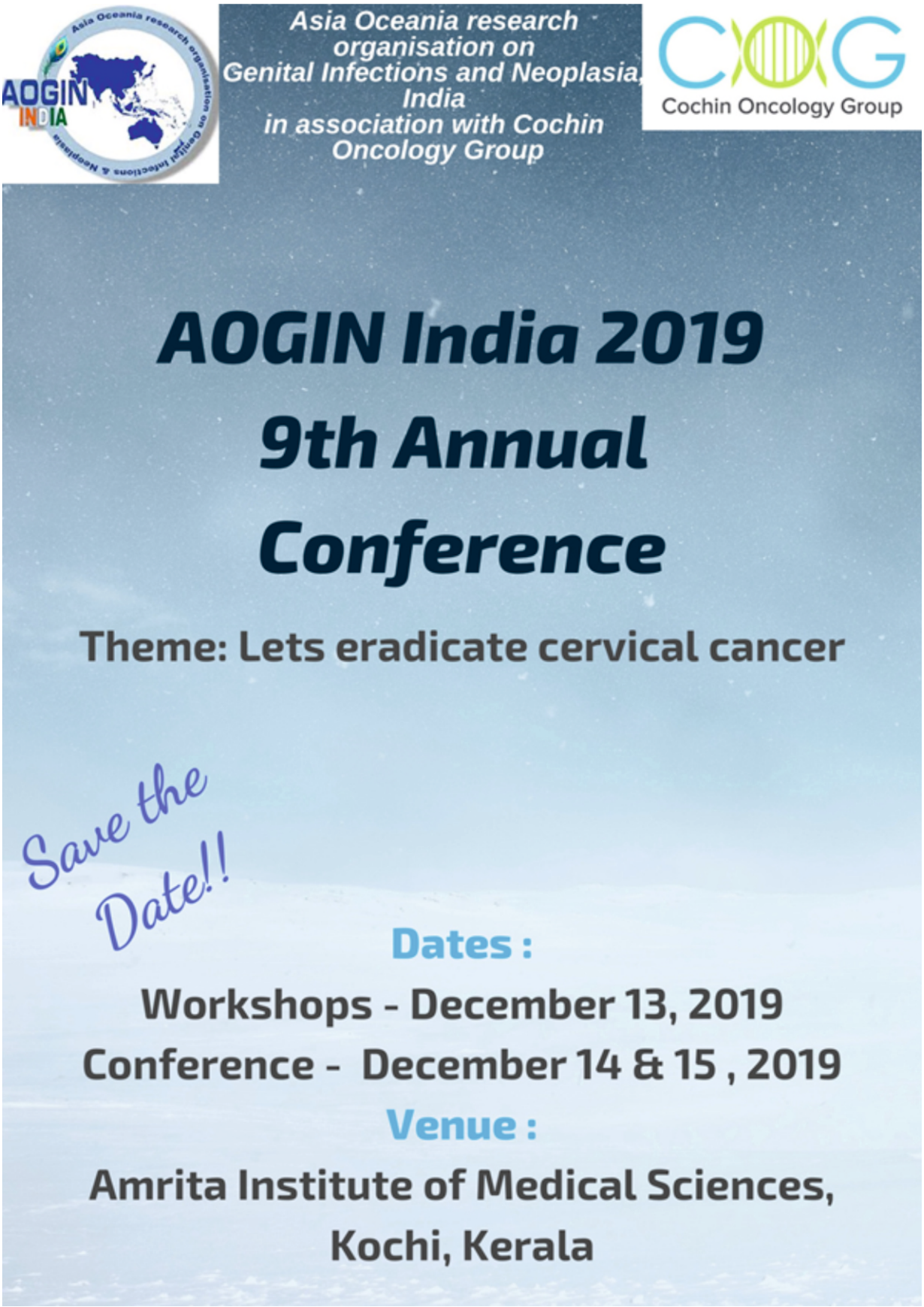
1. GT hosp-33 cases screened
2. IWA clinic- 15 cases screened.
3. Cama opd- 23 cases screened.
Total 74 cases screened.

3. Colposcopies were done on screen positive cases.

The lighter facet

Life is short.
Smile while
you still
have teeth.

Plan your Schedule :



Difficult roads often lead to beautiful destinations.....