

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



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From the editor's desk



Dear Readers,

"Cheers to a new year and another chance for us to get it right."

We bring another issue of AOGIN newsletter. We promise a perfect cocktail to start new resolutions and welcome 2019. In this issue our president Dr. Abraham Peedicayil has shared a concise summary of all the efforts made for cervical cancer prevention. This edition features some latest updates about cervical cancer prevention. Lack of an organized screening program is what stops us from preventing cervical cancer. Dr Malliga has very nicely shared a glimpse of her team's inspiring journey at rural Tamilnadu. Dr Anupama Rajababu has brought forth two very interesting cases for clinical pearls. In journal club we present two innovative aspects of cervical cancer screening and treatment. Dr Srabani Mittal has shared a brief summary of screening efforts made by AOGIN India members across the country with support from Kalyanmayee-AAIWWA and Dr Anitha has shared an extensive update on CME conducted at CMC Vellore. I extend my warmest thanks to all the authors for their contribution.

I sincerely hope that the readers find the issue interesting and intellectually stimulating. We look forward to a proactive participation of all the members.

Happy reading!!
Dr Seema Singhal
AIIMS, Delhi



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Message From the President

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



Dear Colleagues,

Opportunistic screening with cytology and some VIA based population based screening is the current reality in India. Our efforts at cancer prevention must include good coverage for both screening and vaccination. Most of us are clinicians and should differentiate between clinic based practice from population level interventions. We cannot have common guidelines for these two types of activities. Apart from looking after the individual patient, we should influence public health officials and policy makers. Cost-effectiveness has always to be kept in mind in all settings.

HPV testing has become an invaluable part of clinical guidelines for cervical carcinoma screening, triage and follow-up after treatment. Unlike for other medically relevant viruses, analytic sensitivity for the detection of HPV is not the prime driver of test performance. Unfortunately, the great majority of HPV tests currently on the market have a high sensitivity. Consequently, they can yield a large number of clinically insignificant positives, resulting in more colposcopies and biopsies, decreased correlation with actual disease and unnecessary treatment of healthy women. False negative results can also occur due to poor sampling, improper transport & storage and operator error. There are about 250 different types of HPV tests available in the market. Therefore, a cervical cancer screening programme should adopt an HPV test for use as a screening tool, only if it has been validated by demonstrating consistently high sensitivity for CIN2+ lesions, as well as minimal detection of clinically irrelevant, transient HPV infections. The FDA approved tests are Hybrid Capture 2 (hc2) HPV DNA Test (Qiagen), Cobas 4800 HPV Test (Roche), APTIMA HPV Assay (Hologic) and BD Onclarity HPV Assay (Becton Dickinson). Only labs with a high throughput should be relied on.

Currently the three HPV vaccines Gardasil, Cervarix and Gardasil-9 are approved for two doses in the 9 to 14 age group and three doses in the 15 and above age group. Three doses are to be given for those who are immunocompromised. The failure to implement gender-neutral HPV vaccination with high coverage looks like a missed unique public health opportunity. If only girls are vaccinated, the vaccine coverage should be over 70 % for significant herd immunity.

The implementation of HPV-based organized cervical screening programmes with accessible and effective treatment of precancerous lesions, coupled with universal HPV vaccination, is challenging however, this is certainly the way forward. When adequately combined, these two promising prevention strategies have the potential to dramatically reduce cervical cancer incidence and mortality.

Let me congratulate those who are doing excellent work in vaccination, screening and patient care. We have had awareness and educational activities in several sites and our next CME will be in Kolkata in February 2019. Our annual conference will be held in Kochi from 11th to 13th October 2019. Hope to see all of you there to discuss the above issues.

Season's greetings and all the very best for the New Year,

Best wishes,

Abraham Peedicayil

Primary Cancer Care – Organised Cancer Screening Program in Rural Tamil Nadu

Dr. J S Malliga M

Associate Professor, Dept. of Gynecologic Oncology In-charge, Preventive Oncology Cancer Institute (WIA), Chennai

Preventable cancers like cervix cancer and tobacco related cancers contribute to 60% of the cancer burden in India. Early detection and treatment of pre-cancerous lesions can efficiently protect women from cervical cancer. Despite prevention efforts by public and private health sector actors in India, cancer continues to be detected at an advanced-stage.

Lack of awareness among populations and stigma attached to the disease and cancer centers are found to be the major barriers in implementing a successful cancer control program. Moreover accessibility to cancer care is a major concern in our country, where people from rural areas travel a few hundred kilometers even for primary cancer care and early detection of cancers. Providing basic service at their locality will result in early stage reporting and prevention of common cancers.

It is in this context that the Cancer Institute (WIA) has been developing its preventive oncology initiatives. The Institute employs a community-based, innovative prevention and early detection approach through free screening clinics in rural areas.

The Department of Preventive Oncology at the Institute, assists in capacity building, resource identification and allocation and establishing collaborations with local stake holders in setting up satellite cancer screening centers across the State.

The major objective of these primary cancer care center is to bring a change in health seeking behavior of people, especially of women. The major activities include:

1. Creating cancer awareness through continuous education
2. Introducing screening services for common cancers
3. Linkage to referral and treatment centers established locally
4. Developing a local network of expertise in integrated primary cancer control services in rural areas.

During the past 5 years, satellite screening centers have been

set up at Villupuram, Thiruvallur, Pudukkottai, Thiruvannamalai in collaboration with the State government. The government provides space at the headquarters hospital to run the referral services and access to PHCs and SHCs to organize the screening clinics in villages. In other districts like Tirunelveli and Madurai in collaboration with corporates, local NGOs and social clubs, trained local teams are actively engaged in awareness creation and organizing screening programs. Providing primary cancer care services locally will result in early stage reporting and prevention of common cancers.

Mobilizing Participants

The social investigators, based on the population list, survey and enumerate each household through house visits, verify the identity of the subject with the “Aadhar” card (Unique individual ID card in India) or voter’s card or domestic civil supplies document, identify the eligible men and women (Tobacco users and women 30-59 years), administer a questionnaire to document the socio-demographic characters, generate an unique identity number and invite them to screening on the same day in their neighborhood clinic. Informed consent is obtained from eligible women and individual cancer awareness education is provided during the screening visit. In case of non-availability of adult family members or locked doors and non-compliant eligible subjects, three visits on different days are made by the same staff and documented as not contacted if all their three visits are unsuccessful.



Fig 1 : Mobilizing participants

To enumerate and mobilize eligible women (between 29-59 years), other team members conduct home visits. They go house to house and, standing at the door step, they introduce themselves to women and their family members (whoever is present at the time of the visit). A standard introduction would be as follows: “We are from the Adyar Cancer Institute Chennai; we are conducting a free health camp for women in building ‘X’. We have a lady doctor; she will check-up women for “gharbhapayi putrunoi” (cervical cancer) and also for breast cancer. Please bring your ration card as we may require your details and go the ‘X’ Building. It is free of cost.” This simple message works like magic and motivates women to attend.

The Screening Process

Under the cervical cancer prevention initiative, the team from the Cancer Institute reaches out to women in the remote rural areas of Villupuram district in Tamil Nadu. The screening team consists of one medical officer, one program manager, three social workers and five health workers. This team arrives in an ambulance with utilities such as autoclaved instruments, test kits, gloves and consumables, window curtains, examination bed, folding tables, chairs, and

water containers. Supplies are sufficient to create a temporary health care infrastructure in remote rural areas and support the conduct of screening camps over 2-3 days. Over this period, the team will attempt to screen all eligible women in a village; each day, they may screen around 20-30 women aged 29-59 years for cervical, breast and oral cancers. Those requiring further diagnostic tests are referred to the Institute. Women are also taught to do a breast self-examination. Tobacco cessation counselling and oral examination is offered to tobacco using males and females.

During the camp, the ambulance emblazoned with “Adyar Cancer Institute” (written in English and Tamil) becomes a landmark in the village. The ambulance arrives with the entire team at the designated village around 10 am. The team then sets up the temporary clinic usually in a public building (e.g. community hall, school, a room in Panchayat office, or Anganwadi center) provided by the “*thalaivar*”¹ (Panchayat leader). The set-up takes about 30 minutes, and can include cleaning the space, putting up the curtains on the windows, and organizing equipment and test kits.

‘*Thalaivar*’ is a village panchayath president. He plays a vital role making the screening success. He is usually contacted by the programme manager 4-5 days prior to the camp to seek his approval. ‘*Thalaivar*’ discusses matters with the key community leaders, obtains their consent to organise the camp. After his approval and confirmation of the dates, the camp is organised by Adyar team. Besides providing approval, he also makes an appeal to villagers to participate in the camp.

HPV testing as primary screening test for cervical cancer

It has been proved that a single round of HPV screening has a significant impact on cervical cancer incidence and mortality (Sankaranarayanan 2009). The impact of visual methods with acetic acid and lugol’s iodine has shown variable results even within the country. The techniques being highly subjective, issues of repeated training with attrition of trained staff, high rate of false positives which increases the need for biopsy and poor compliance to follow up of screened positive women are some of the challenges we ourselves experience in our community screening programs. Therefore the introduction of the more objective HPV testing which does not require sophisticated laboratory setup or expert technicians to carry out the tests is the pragmatic next step and hence for the first time in the country, HPV testing as the primary screening test has been introduced for mass screening. Health workers are being trained to take the samples and testing for the virus. Testing the samples for HPV DNA is carried out in the community center by the trained Health Workers. Women who are positive for HPV are followed up and a cervical smear collected at their doorstep. Women are referred for colposcopy if cytology is ASCUS + and biopsy proven CIN 2+ women are treated at the Institute.



Fig :2 HPV analysis by HealthWorkers at the rural center, Villupuram

At the start of the program, to evaluate the effectiveness of HPV DNA testing in the community set up, a pilot study of comparing cytology and HPV- DNA + VIA/VILI was offered to 10,623 women between Feb 2015 – Nov 2016. HPV DNA testing performance was at par with cytology in picking up the high grade dysplasia cases, both missing out 3 cases of CIN 2+ each. Since then the screening policy has been switched over to HPV DNA testing along with VIA/VILI and till date a little over 40000 women have been screened with HPV 232 precancers detected and 50% of them have completed treatment.



Fig 3: Community outreach

Evolution of the program

Implementation of an organized screening program is challenging but doable. It has been proved feasible with a systematic approach, involving local stakeholders, using local resources and partnering with the government. The network coverage rate of screening hovers around 50-52% in the real world with the best of efforts.

HPV DNA testing based screening programs are implemented in other districts, Pudukkottai, Thiruvannamalai and Thiruvallore. Referral and treatment linkage facilities has been the greatest challenge especially when the satellite centers are far away from the tertiary care center. But this challenge has pushed us to enhance local capacity building, to create a local network of expertise and make use of the available resources at the Government health centers. In Cuddalore district the proposal for HPV and thermo-coagulation based "Screen and Treat" program is underway. Therefore each model evolves in itself in a unique way adapting to the needs of the local population and availability of resources.

Conclusion

The policy of the State Government in introducing the NCD control program has greatly enhanced the awareness on

prevention and early detection of cancers among the population. Post implementation of the government program, the measurable significant change that happened in compliance rate to screening gave us the confidence to approach the State government for space in each district headquarter hospital and establish an organized common cancer screening program in the community. Involving the local community-stakeholders and subjects, having a well-trained team of health providers, availability of sustained financial support and a dedicated leadership at the Cancer Institute are some of the many factors that has made this success story a reality. And the journey has just started!!

Acknowledgements :

Box messages: An Observers perspective: Dr.Suneeta Krishnan, PhD and Team,
Ex-Country Director, Research Triangle Institute Global India Private Ltd.

The lighter facet

"The more I want to get something done, the less I call it work."

-Richard Bach

"It's the little things you do that make the big things happen".

-Mike Dooley



Compiled by

Dr Seema Singhal
All India Institute of Medical Sciences, New Delhi.

Article 1

Loop electrosurgical excision procedure with or without intraoperative colposcopy: a randomized trial

Hilal Z, Reznicek GA, Alici F, et al. Loop electrosurgical excision procedure with or without intraoperative colposcopy: a randomized trial. Am J Obstet Gynecol 2018;219:377.e1-7.

Background:

Loop electrosurgical excision procedure (LEEP) is the standard surgical procedure for cervical dysplasia and it provides the most reliable specimens for histology with the least morbidity. This procedure, however, is not without harm, especially premature delivery. Therefore, efforts have been undertaken to reduce the amount of cervical tissue resected during surgery, including preoperative colposcopy for identifying the location and size of the CIN lesion, replacement of cold knife conization with LEEP, and the use of intraoperative colposcopy.

Research question: whether or not intraoperative colposcopy has benefits in terms of cone volume reduction without compromising oncological safety, namely the resection margin status.

Materials and Methods:

In a prospective, randomized trial, loop electrosurgical excision procedure was compared with loop electrosurgical excision procedure performed under direct colposcopic vision in a 1:1 ratio. LEEP was performed under general anesthesia in an outpatient setting.

Group 1 (LEEPedirect colposcopic vision [DCV]), LEEP was carried out with a binocular colposcope (KSK 150 FC-Kolposkop; Zeiss, Oberkochen, Germany) with 3 magnifications. First type of TZ was assessed, then acetic acid 3% was applied to identify the cervical abnormalities. Once the resection zone was determined, an electrical loop was used with a size according to the dimensions of the cervix. Then, the electrosurgical unit (Vio 300D; Erbe, Tübingen, Germany) was set at 120 W on blend 3, and the high-cut mode was set and LEEP was performed by carefully passing the loop around the TZ from top (12 o'clock) to bottom (6 o'clock). After the TZ was removed, an additional tissue was excised from the ectocervix if the visible lesion was not fully excised or if preoperative colposcopy suggested the presence of an endocervical lesion. Endocervical curettage was not performed. Hemostasis was exclusively obtained with a ball electrode using the spray or forced coagulation modes. In all procedural steps, the colposcope was used.

Group 2 : Same steps were performed without colposcope.

A sample size of 87 per group (n 1/4 174) was planned (with an assumed type I error of 0.05 and drop-out rate of 5%) to achieve 90% power to detect a 25% reduction in cone mass (with an assumed cone mass of 2.5 ` 1.6 g in the control group) using a nonparametric test (Mann-Whitney U).

Results :

From October 2016 through December 2017, 182 women were randomized : 93 in the loop electrosurgical excision procedure group and 89 in the loop electrosurgical excision procedure direct colposcopic vision (DCV)group.

Primary outcome : DCV LEEP vs LEEP

- smaller cone specimens in DCV LEEP group (weight: median 1.86 [interquartile range 1.20-2.72] vs median 2.37 [interquartile range 1.63-3.31] g, respectively, P= 0.006).

Secondary outcome: DCV LEEP vs LEEP

- Resection margin status involved vs free margin: 12 (13%) vs 75 (82%) and 11 (12.4%) vs 75 (84.3%);
- Fragmentation no vs yes: 85 (92.4%) vs 7 (7.6%) and 84 (94.4%) vs 5 (5.6%);
- Procedure time: 190 (interquartile range 138e294) and 171 (interquartile range 133e290) seconds;
- Time to complete hemostasis: 61 (interquartile range 31e108) and 51 (interquartile range 30e81) seconds;
- intraoperative blood loss (hemoglobin difference): 0.4 (interquartile range 0.2-1.0) and 0.5 (interquartile range 0.1-0.9);
- Complication rate: 6 (6.5%) and 2 (2.2%).

Conclusion :

LEEP- DCV and LEEP, are both suitable for treating cervical dysplasia. However, LEEP-DCV has a significant advantage in terms of a lower resected cone mass and thus reduces the amount of healthy tissue lost due to surgery. The primary outcome parameter of this study, resected cone mass, was significantly smaller in the LEEP-DCV group, while the rate of free margins, were comparable between the 2 study groups. This study provides high-level evidence that intraoperative colposcopy during conization is useful for reducing cone mass and potentially reduces the risk of subsequent preterm delivery.

Article 2

Colposcopy telemedicine: live versus static swede score and accuracy in detecting CIN2+, a cross-sectional pilot study

Taghavi K, Banerjee D, Mandal R, Kallner HK, Thorsell M, Friis T, Kocoska-Maras L, Björn Strander B, Singer A, and Wikström E. Colposcopy telemedicine: live versus static swede score and accuracy in detecting CIN2+, a cross-sectional pilot study. BMC Women's Health 2018; 18:89. <https://doi.org/10.1186/s12905-018-0569-1>

Background:

Globally, cervical cancer screening and examination is performed by nurses, midwives and colposcopy specialists with varying accuracy. However, these programs often lack quality controls and the efficacy of screening may be further undermined by inter-observer variation due to subjectivity of assessments and variable accuracy. The evolution of telecommunication technologies has given rise to the field of telemedicine, which allows specialised input regardless of geographical location with a benefit of increased access to specialized care and reduced treatment costs. Telemedicine has the potential to overcome the lack of on-site supervision, and increase the accuracy of assessments. This pilot study evaluates the feasibility of colposcopy telemedicine by colposcopy Swede score evaluation versus static image Swede score evaluation for detecting cervical intra-epithelial neoplastic lesions greater than, or equal to grade 2 severity (CIN2+), using the Gynocular colposcope and its mobile phone application.

Research Question :

What is the accuracy of static image colposcopy images by specialists?

Methods:

VIA or HrHPV positive women were examined using a mobile colposcope, in a rural clinic in Kolkata, India. Live versus static

Swede-score colposcopy assessments were made independently. All assessments were by gynecologists, junior or expert. Static image assessors were blinded to live scoring, patient information and final histopathology result. Primary outcome was the ability to detect CIN2+ lesions verified by directed biopsies. Diagnostic accuracy was calculated for live versus static Swede-score in detecting CIN2+ lesions, as well as for interclass correlation.

Results: 495 images from 94 VIA positive women were evaluated in this study. Thirteen women (13.9%) had CIN2+ on biopsy. No significant difference was found in the detection of CIN2+ lesions between live and static assessors (area under curve = 0.69 versus 0.71, $p = 0.63$). A Swede-score of 4+, had a sensitivity of 76.9% (95% CI 46.2–95.0%) and 84.6% (95% CI 54.6–98.1%), for live- and static-image assessment respectively. The corresponding positive predictive values were found to be 90.9% (95% CI 75.7–98.1%) and 92.6% (95% CI 75.7–99.1%). The interclass correlation was good (kappa statistic = 0.60) for the senior static assessors.

Conclusions: Swede-score evaluation of static colposcopy images was found to reliably detect CIN2+ lesions in this study. Larger studies are needed to further develop the colposcopy telemedicine concept which may offer reliable guidance in management where direct specialist input is not available.

Forthcoming Activities

AOGIN India CME will be organized by Department of Gynecologic Oncology Chitranjan cancer institute on 9th Feb 2019.

Clinical Pearls

Compiled by Dr Viral J Patel, Mariam Anjum iltikkar, Dr Anupama Rajanbabu
Department of Gynecologic Oncology, Amrita Institute Kochi.

- Q1** Mrs X 42 years old was found to have LSIL on routine screening with PAP smear. She was subjected to colposcopy examination, which revealed following finding.

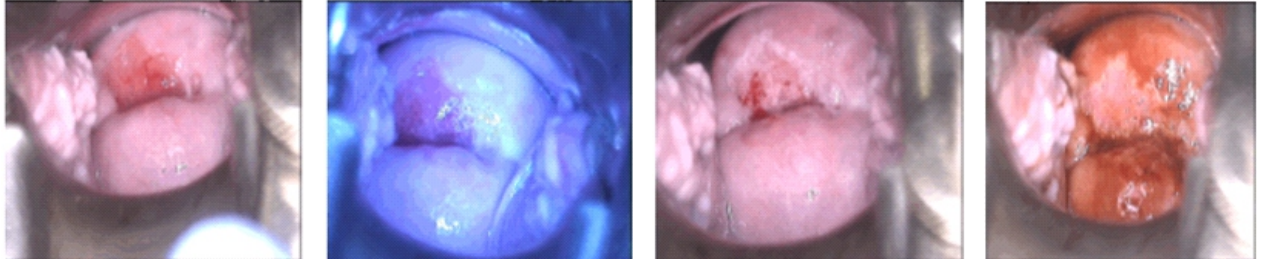


Fig 1

- 1a. What is your interpretation ?
- 1b. Her colposcopic biopsy reported as mild dysplasia with koilocytic atypia (LSIL), and her HPV is negative. How to follow up?

- Q2** Mrs Z, a 37 years old self referred for colposcopy with PAP smear finding s/o ASCUS. She was subjected to colposcopy examination, which revealed following finding.

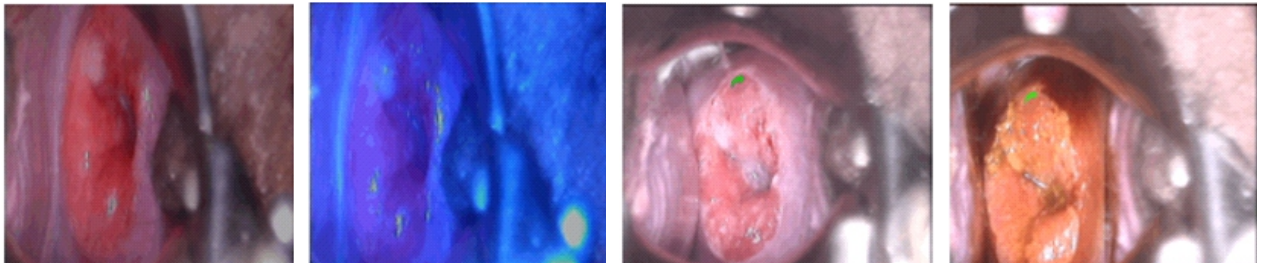


Fig 2

2. What is your interpretation and further management?

Answers

1a: Colposcopic examination showed 10 mm milky acetowhite area with irregular margin at 10-12 o'clock position and were iodine negative. There were fine regular vessels. The SWEDE score was calculated to be 4, which was s/o low grade lesion in cervix.

1b: Follow up plan: Cotesting after 1 year .

2: Colposcopic examination showed 5 mm acetowhite area at 12 o'clock position with irregular margin and was faint yellow on Lugol's iodine. There were no abnormal vessels. The SWEDE score was calculated to be 4, which was s/o low grade lesion in cervix. HPV taken reported as negative for high risk subtypes.

Follow up plan: Cotesting after 3 year.

Cervical cancer screening in India through community out-reach services

Dr Srabani Mittal

For the second successive year, AOGIN India continues to provide cervical cancer awareness and screening services by organizing out-reach clinics in different parts of the country. The clinics are organized by AOGIN members with funding support from Kalyanmayee-AAIWWA (Airports Authority of India Women Welfare Association). The community mobilization for the clinics are done by the local NGOs or by community volunteers. Prior to holding the screening services, mass awareness campaigns are conducted to provide appropriate information to women and community at large.

Women aged between 30-60 years are screened by PAP and VIA. Some of the cities that have HPV screening tests available as a part of their ongoing projects are additionally providing these tests free of cost to all women participating in

the outreach clinics. Majority of the cities are also offering breast screening services to the participating women during the clinics. Free consultation on minor ailments and other gynecological problems are provided at the clinic by attending doctors. The prescriptions are supported by distribution of free medicines as much as possible.

This year the screening clinics were initiated from September 2018. Till 2nd December 2018, a total of 1059 women have been screened through 23 outreach clinics organized in 12 cities. The total number of VIA positive women detected through these clinics is 76. All screen positive women are being followed up and recalled for colposcopy &/or biopsy and treated as per indication. The city-wise distribution of number of clinics conducted for the period September - 2nd December 2018 is summarized below.

Region	Name of City	Total number of clinics organized till 2 nd December 2018
NORTH	Delhi	2
	Lucknow	2
	Varanasi	0
WEST	Mumbai	1
	Ahmedabad	2
	Pune	1
	Jabalpur	2
EAST	Kolkata	2
	Bhubaneswar	3
NORTH-EAST	Guwahati	2
SOUTH	Chennai	1
	Hyderabad	0
	Bangalore	3
	Coimbatore	2
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CME on Cervical Cancer Control: An update

Dr Anitha Thomas, Dr Ajit Sebastian

A CME on Cervical cancer control was held on 3rd of November 2018 under the aegis of AOGIN India at the prestigious Christian Medical College, Vellore on 3.11.2018 at the CK Job Hall, Paul Brand Building in the main hospital Campus.

The update was attended by a large number of local practitioners and students with a total number of delegates reaching 98. The interactive discussions were the main highlights of this academic feast. The galaxy of National faculty included Dr. Srabani Mittal (Secretary AOGIN India), Dr. Seema Singhal, (editor) and Dr. Latha Balasubramani and Dr. Anupama Rajan Babu (executive members of the AOGIN India), along with many more regional faculty colleagues.

The meeting was started with a prayer by the chaplain following which Dr. Anitha Thomas, Organizing Secretary of CME welcomed the participants. The scientific deliberations began with the first session on "Screening for cervical neoplasia" and Dr. Seema Singhal began the discussion with "Epidemiology of cervical cancer in India". A brief review of current burden and limitations of Indian cancer registry system were discussed. Dr. Malliga from Chennai delivered an inspiring talk on screening programmes in Tamil Nadu and shared her journey. The trouble shooting strategies of this program was appreciated unanimously by everyone. In India for breast cancer screening, Clinical Breast Examination was the most feasible and cost effective modality. Thereafter, Dr. Srabani Mittal spoke on the Global scenario in screening for cervical cancer, latest data and trends were beautifully projected. Dr. Lakshmi Seshadri, spoke on the cervical cancer screening guidelines by FOGSI and clinical application of FOGSI GCPR in day today practice was highlighted with the help of real life scenarios.

The 2nd session was on evaluation and management of pre-invasive cervical lesions. Dr. Priya Abraham, Professor of

Virology in CMC, Vellore spoke on HPV testing and molecular basis of available tests, their interpretation and limitations were explained. Dr. Ajit Sebastian a faculty in Gynae Oncology, CMC, Vellore emphasized the need on risk based colposcopy. Dr. Latha Balasubramani spoke on management of atypical glandular cells on PAP and highlighted the importance of careful and extensive colposcopic evaluation in these cases. Dr. Rachel Chandy faculty from Gynae Onc, CMC, Vellore spoke on Ablation vs Excision in preinvasive lesion and explained the criteria to be fulfilled prior to ablation. Dr. Srabani showed interesting videos in the management of CIN, which were very useful especially for post graduate students. Management of Pre invasive lesions was extensively deliberated with case based Panel Discussion moderated by Dr Anupama Rajababu from Amrita Institute Kochi. The delegates participated actively and discussed the issues faced by them in their clinical practice.

In the last post lunch session on HPV Vaccine. Dr. Anupama spoke on the types of HPV vaccine. Dr. Abraham Peedicayil, the President of AOGIN India presented an extensive review of prophylactic HPV vaccines. He beautifully highlighted the role of continuing screening even after vaccination and clarified several queries raised by delegates including limitations of vaccine in HPV positive women or women with CIN. Dr. Vinodha Thomas faculty in Gynae Oncology, CMC, Vellore spoke on HPV vaccines guidelines and recommendations and Dr Seema Singhal spoke on barriers to prevention. The highlight of this session was a presentation by Dr. Abraham Peedicayil and his team titled "Revisiting of AOGIN 2018 held at Sydney". A brief review of interesting topics discussed in AOGIN 2018 was presented and it was beneficial for all those who could not attend the International conference. Dr. Ajit Sebastian took opportunity to propose "Vote of thanks" to acknowledge the efforts of all those who participated, supported and made the CME a great success.

