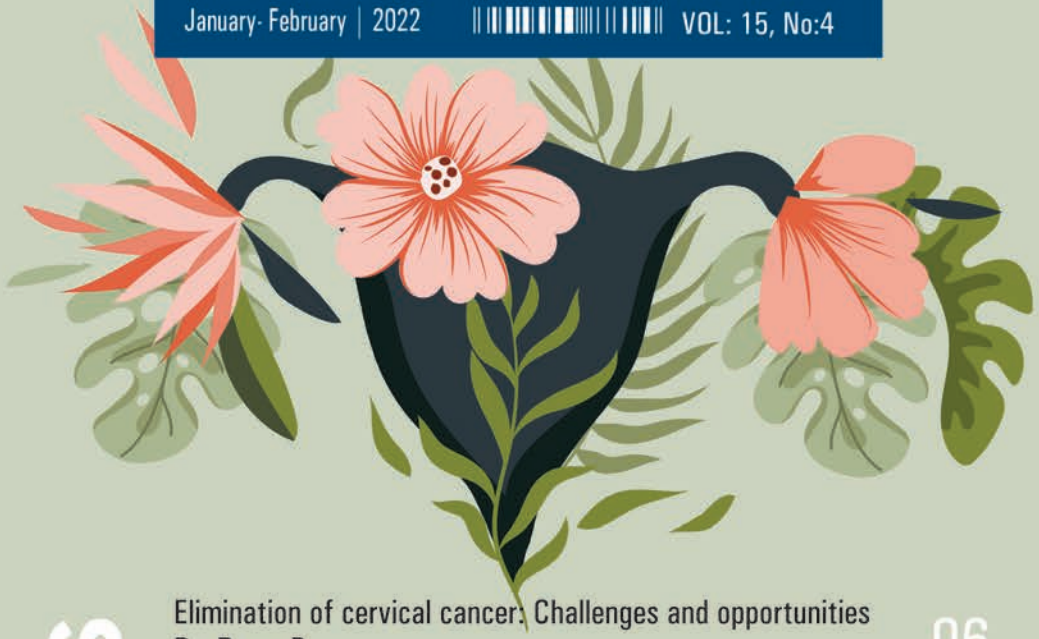
KERALA FEDERATION OF OBSTETRICS & GYNECOLOGY

KFOG JOURNAL

GYNO ONCOLOGY

January- February | 2022 VOL: 15, No:4



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Dr. Ajith S.
MD,DGO, DipNB, FRCOG
President KFOG

Respected seniors and dear friends

Thank you, Dr Suchitra, for bringing out the fourth journal of this year. Dr Reena has done an excellent work collecting immensely relevant articles and editing it impeccably. I thank all the authors for contributing articles aptly relevant to our day to day practice.

Dr Suchithra and team have selected oncology as the theme for this edition of the journal. The oncology committee of KFOG is doing commendable work to try and eliminate cancer cervix. In this context,sensitization of the parents of girl children regarding need for HPV vaccination is the need of the hour.

As the number of covid cases were declining we had begun resuming our physical meeting. The government decision to administer booster covid vaccine had also filled us with hope. However,the unexpected arrival of the third wave forced us to put more restrictions into effect. Fortunately, the omicron variant has been merely causing mild illness and gradually replacing delta variant. We expect the number of cases to start declining by the last week of February and plateau by the first week of April ,in which case we might possibly be able to officially conduct our AKCOG in Kannur on 13, 14 and 15th May.

I take this opportunity to thank all the KFOG members for your kind cooperation.

With warm regards

Dr Ajith S MD, DGO, DipNB, FRCOG
President KFOG

Dr. Venugopal M.
Secretary KFOG

SECRETARY'S MESSAGE

Dear KFOGites""Hope this Omicron wave heralds the beginning of the end of the pandemic and life will be back on track soon."This edition of KFOG bulletin has articles focused on Oncology.The dynamic editor Dr Suchitra ably assisted by Dr Reena and team have taken a lot of effort in compiling the articles which will keep us updated in our daily practice. "Congratulations to each one who contributed to this edition of the bulletin."The bulletin showcases the energy and enthusiasm of the editorial team and the attempt to give an opportunity to new faces across Kerala is laudable."I urge all members to enthusiastically contribute to the future editions of the publication ."During the whole of last year the bulletin has played an important role in keeping our members updated and i am sure it will continue to do so in the future."Best wishes and hope the year 2022 brings good fortune and prospects to all."

Dr. Venugopal M.
Secretary KFOG

FOREWORD

At the outset let me appreciate the team for selecting gyne oncology as the theme for fourth edition of KFOG journal. Kerala is reported to have the highest cancer rates among all the states in India. The most common malignancies encountered in women are Ca breast, Ca ovary ,Ca cervix and Ca endometrium.

There is voicing concern over the rise in breast cancer rates in our state. Women in early thirties and fourties are at considarable risk to develop breast cancer. Only way to decrease the incidence of Cancer breast is increasing awareness among common man. Always emphasis should be given to self breast examination atleast by age of thirty.

Cancer cervix is the second most leading malignancy among our women. It can be detected very early by screening tests and can be treated (secondary prevention) . HPV Vaccine is a new weapon to prevent cervical cancer(primary prevention).

As far as ovarian malignancies are concerned, there is no premalignant stage or effective screening tests available. Women with high risk for ovarian malignancy should be advised screening with trans vaginal sonography and Ca 125.

Endometrial cancer is obviously related to unopposed estrogen action. There is no effective screening tests available..

I am sure that KFOG journal will be welcomed by all the academic faculties , practising Gynecologists and the postgraduate students. Wishing the endeavour all success.

Dr. N. S. Sreedevi
Past President
KFOG

Dear Friends,

Dear Teachers, colleagues and friends,

Greetings for a healthy, happy new year!"We have come to last issue of this year's KFOG Journal.. We have traced the journey of a woman from Adolescence, Infertilty, Pregnancy and Childbirth to Menopause. Many asked me, "What next ?" When Gyno oncology was mentioned, the response was, " Oh no, what an end!" However, today one out 39 women are faced with this situation, at some point of their life and it is not an end, only a pause! With awareness, prevention, early detection and timely treatment, it can be overcome. We have an array of topics by various authors and experts to expand on them."Hope you will find it interesting, informative and innovative. Thank you all for your participation and good wishes?

Signing off for now,

Ciao,

Dr. Suchitra Sudhir
Editor,
KFOG Journal 2021-22

Respected seniors and dear friends,

Warm greetings to you all.

Yes, cancer is a silent killer that creaps up on us with out warning. Yet we general gynecologists can do much to prevent, cure and improve quality of life . In this fourth issue of KFOG journal we are trying to enlighten our members on this aspect. Thiruvananthapuram, Kollam, Adoor and Malanad societies are contributing to this issue.

I sincerely express my gratitude to respected authors, for giving articles in time and fulfilling the aim of KFOG journal.

Thank you KFOG President Dr. Ajith. S and secretary Dr. Venugopal and senior members of KFOG for giving me this prestigious opportunity. It is a pleasure to work under the patronage of great teacher N.S. Sreedevi madam.

Even a fresh hand can do the job easily with Dr. Suchithra Sudheer a great mentor, who brought a new way of journal release. Thank you madam for your immense help.

Thank you very much

Dr. N. R. Reena
Associate Editor,
KFOG Journal Fourth Issue 2021-22

ELIMINATION OF CERVICAL CANCER:
CHALLENGES AND OPPORTUNITIES

Cervical cancer is a preventable tragedy. In 2020, an estimated 6,04,000 women were diagnosed with cervical cancer worldwide and about 3,42,000 women died from the disease. One fourth of these cases are reported from India and this number exceeds the number of women dying due to maternal mortality. So, women being saved by reduction in maternal mortality are now dying due to this preventable cancer.

In May 2018, Director-General of the World Health Organization (WHO), issued a call to action for the elimination of cervical cancer. Elimination of cervical cancer means reducing the disease incidence to such a low level that it ceases to be a public health problem. After many consultations WHO confirmed that cervical cancer can be eliminated when the age-adjusted incidence rate is less than 4 per 100,000 women-years.

Dr Rema P
HOD & Additional Professor in Gynaecological oncology RCC, Thiruvananthapuram

To achieve the target elimination of cervical cancer the advised strategy is

- 90% Vaccination -Vaccinate 90 % of eligible girls against Human Papilloma Virus (HPV).
- 70% Screening -Screen with a precise test 70% of eligible women at least twice in their lifetime at ages 35 and 45
- Treatment 90% -Effectively treata 90% of those with positive screening test or a cervical lesion

Cervical cancer is one of the cancers where natural history is very well understood. Cervical cancer is caused by persistent infection with one of the 14 high risk HPVs including HPV 16, 18, 31, 33, 35, 39, 45, 51, 52, 56, 58, 59, 66, and 68. Two of these, HPV16 and HPV18, are responsible for most HPV-related cancers. In India, 84% of cervical cancers are caused by HPV 16/18, more than the global average of 70%. HPV infection is very common in reproductive age group. The reported prevalence in India is 7.9%[1]. 80% of women in reproductive age group get HPV infection in their lifetime. But majority of HPV infections are transient and gets spontaneously cleared in 12 – 24 months. In a minority the infection persists and leads on to development of cervical precancers which if untreated can progress to invasive cervical cancer.

HPV vaccination

Considering the fact that HPV infections cause almost all of the cervical cancers, primary prevention of cervical cancer by HPV vaccination is the logical solution to this disease. When HPV vaccines were licensed in 2006 after extensive trials, it was speculated that this could lead to eradication of cervical cancer. Although this has not happened, the vaccine has probably stood the test of time. We have now long-term results of safety and efficacy of the vaccine and the vaccine has been introduced in the immunization programme of over 130 countries. HPV vaccination is still not there in India's National Immunisation programme and efforts are underway to include this.

In addition to the quadrivalent and bivalent vaccine, now a nono valent vaccine also has been licensed in India. It is effective against HPV 6,11,16,18, 31,33,45,52 and 58. It has similar immunological response as the quadrivalent vaccine and greater efficacy compared to older vaccines. An Indian vaccine has completed phase 3 trails and will be marketed soon which should reduce the vaccine cost and increase vaccine availability in the country.

The recommended age for vaccination of girls is 9-14 years. Studies in India has shown that 2 dose vaccines at 6 months interval are as effective as 3 doses in terms of immunogenicity in girls aged less than 15 years. For immuno-compromised individuals, including HIV-infected, the three-dose schedule is recommended irrespective of age. Preliminary data suggest that even one dose could be sufficient. WHO's Strategic Advisory Group of Experts (SAGE) has made an off-label recommendation that one dose to adolescent girls followed by a delayed second dose 3-5years later, while more

robust data accumulates. The current strategy is to immunise girls in standard 6 in schools and it is speculated that if all Indian girls were vaccinated it could translate into saving nearly 50,000 lives per year.

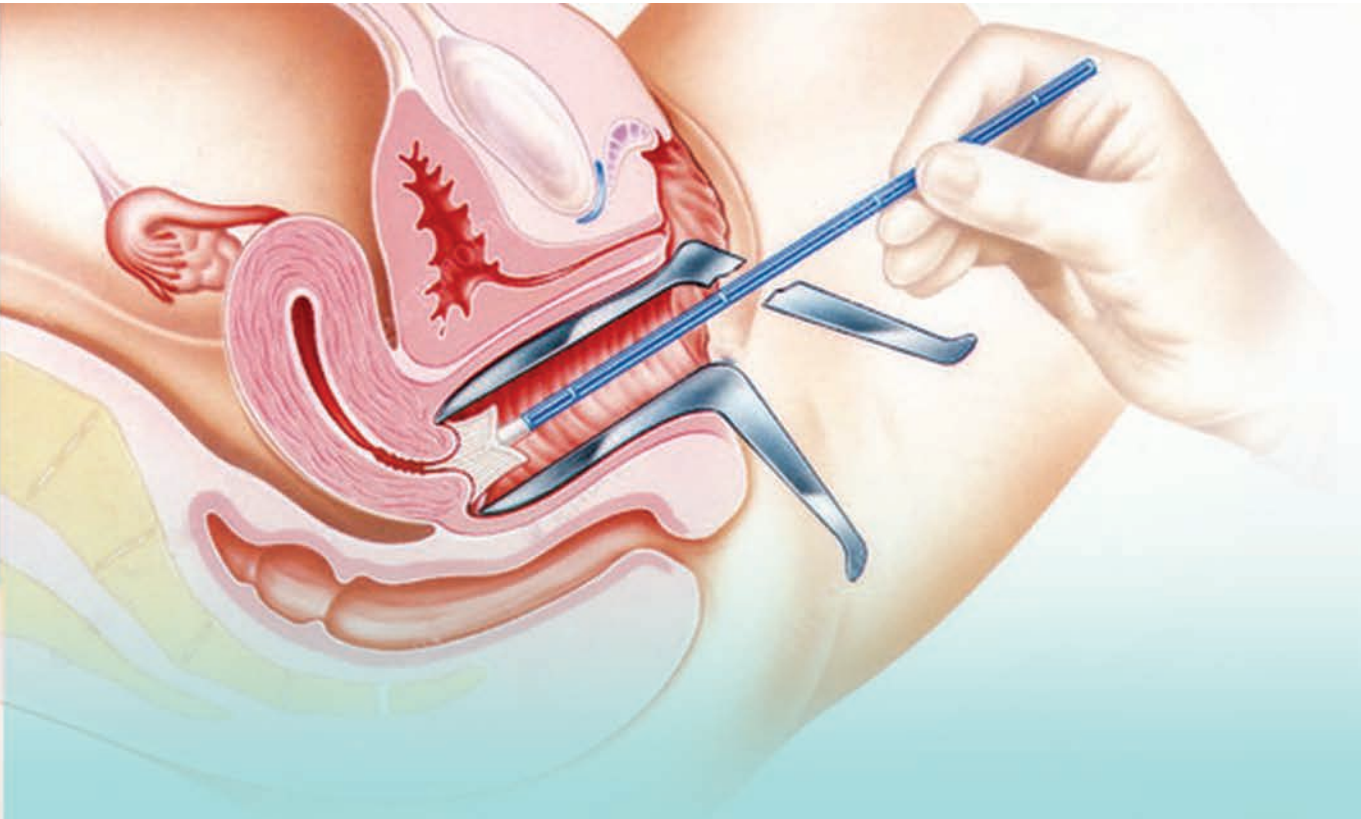
Screening for cancer cervix

In developed countries cervical cancer incidence reduced dramatically when effective screening programmes were implemented. Unfortunately, there is no organised screening programme for the country. Common screening tests for cancer cervix include Cervical cytology, HPV DNA Tests, andVisual inspection with acetic acid (VIA).

Cervical cytology

Cervical cytology was never the ideal screening programme for India due to the lack of necessary manpower, infrastructure and quality control and

hence high-quality cytology screening was not feasible for wide-scale implementation of the cervical cancer screening program. The reported sensitivity and specificity of cytology are 58% and 93.51% respectively which is almost in par with Visual inspection. Cytology needs to be repeated frequently to improve its sensitivity. Hence HPV testing and VIA are preferred over cytology in in low resource countries.



Visual inspection after acetic acid (VIA)

Successful screening in low resource settings needs low-cost, low-technology screening methods which can give wide coverage of at-risk women. WHO has recommended VIA as an alternative to cytology for screening. VIA has similar sensitivity as cytology. VIA includes examination of cervix by naked eye after application of 3-5% acetic acid with good light source. VIA is considered to be positive when distinct opaque aceto white area is present. VIA is a simple visual test, does not require laboratory and results available immediately. Paramedical workers can also be trained in performing VIA. But the challenge is to get the health workers trained, maintain their skills and ensure compliance with colposcopy and treatment.

HPV DNA Testing:

HPV DNA testing is the most accurate cervical cancer screening test. It has a sensitivity of 96% specificity of 92-95%. Detection of oncogenic HPV is a specific test in women more than 30 years in whom transient HPV infection is less likely. The impact of screening by visual inspection with acetic acid (VIA), cytology or HPV testing on cervical cancer incidence and mortality was investigated in a cluster randomized controlled trial in India which showed that HPV testing could reduce cervical cancer mortality by 50%[2].Hybrid capture test (HC2) and PCR for high-risk HPV are the standard HPV tests. Unlike cervical cytology, HPV testing is reproducible and is devoid of inter observer variation. The high negative predictive value of HPV DNA testing helps in increasing screening interval.

WHO in the revised recommendation for cervical cancer screening published in June 2021

recommends "HPV test as primary screening test, starting at the age of 30 years with regular screening every 5 to 10 years. In HIV positive women it is recommended to start HPV testing at 25 years with ascreening interval of 3-5 years. Screening can be stopped at 50 years with 2 consecutive negative screening results. Self-collected samples are equally good as physician collected samples for HPV testing with RT PCR and women feel more comfortable taking their own samples.

Management of Screen positives

The screening programme must be linked to appropriate treatments for CIN, and also provide referral for treatment of women with invasive cervical cancer. The screen positives may be treated if suitable for ablative procedures like thermal ablation in Type 1 transformation zone lesions less than 75% of transformation zone or triaged with confirmatory test like HPV genotyping or colposcopic biopsy and then treated accordingly. Even when the colposcopic biopsy is normal they need close follow up to detect disease in the future.

Cervical cancer elimination in Kerala

Kerala has the lowest incidence of cancer cervix in India. The latest reported incidence is 6.8 per 100000 in the Population based cancer registry Trivandrum. But we must remember the fact that this falling incidence doesn't guarantee against a future rise as happened in other countries like China considering the change in behavioural pattern of the society. So, this low incidence should be utilised for facilitating cervical cancer elimination by effective interventions now. An efficient screening programme with HPV testing will help in further lowering the incidence and when coupled with vaccination of girls less than 15 years will help in sustaining the low incidence thus reaching the target of elimination of cervical cancer.

Gynaecologists have an individual role in cervical cancer elimination programme. Campaigning HPV vaccination and prescribing the vaccine whenever opportunity arises, using HPV testing for screening whenever a woman between 30-49 years comes to your office, triaging screen positives with colposcopy and using thermal ablation or Loop electrosurgical excision (LEEP) for treatment of CIN will help Kerala reach the target of eliminating cancer cervix

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THE SENTIMENTS BEHIND THE DIAGNOSIS OF CANCER

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The word 'cancer ' spells doom for most patients. The first thoughts that race through the mind are "I am going to die" "What is going to happen to my family – who is going to take care of them? and most often the thought "I cant afford expensive treatments". An emotional outburst often follows and a feeling of hopelessness prevails. Anxiety, distress , depression are common emotions coupled with disbelief, shock and even anger.

Nothing about this is wrong or right and it is quite likely that a doctor too will experience quite the same emotions placed in that kind of a situation.

Treating physicians are all about cure, often totally missing the storm that is raging within the patient. Talking about hysterectomies and chemotherapy at this stage , believe it or not, will fall on deaf ears!

The need here is compassion , gentle talk, sitting through the outburst and patient listening from the side of the doctor which means "quality time" – all of which unfortunately are not the defining traits of most doctors. Again it is not a fault finding game, rather a realization that we can't do everything! Trained counselors can take them through this difficult period but some of this must be dealt with primarily by the physician.

The first question often is "what stage of cancer am I in? " Again here it pays to be truthful , but at the same time softening the blow! A difficult task always, which requires skillful communication , being gentle yet firm.

It doesn't pay to hide things from the patient – definitely not the diagnosis. A well informed and motivated patient is the best bet to smooth sailing. They like to hear numbers where survival is concerned and the doctor should be able to provide this. Five year survival rates baffle most, and it must be explained carefully - they often think that 5 years is the upper limit to their lives !

The treating physician must outline management plans but not right

at the start - allow time for the diagnosis to sink in, for acceptance and repair. Also there is so much more that they need to be told about, other than treatment- about having and continuing to have a "life", social health, body image and solutions, sexual health, time and the financial economics of treatment and much much more ! Tackling treatment associated toxicity and morbidity needs to be addressed clearly.

As is in most situations knowledge is power ! At the same time we must learn to spot anxiety and depression early and seek appropriate help.

Every visit must be used as an opportunity to look into their mental health as well. Some open up , many don't! Restlessness, a dry mouth, lack of sleep, not being able to put thought into words are all pointers that the patient needs help. Referral to a psychology service will help.

Seeing is believing and it pays to put them onto self help groups where they interact with others with the same kind of problems - displaying pictures in the counseling room, of fighters and survivors is a big boost to the mind. Often family counseling and telephonic "how do you dos "are uplifting. In the age of whats app and digital technology this is no rocket science ! All that it requires is a dedicated set of counselors and the will to set up the system .

Videos of what and what not to do with a scientific lean and measures on coping with the treatment are mostly well accepted and welcome. On line communities and support groups need to be formed.

Special situations arise when younger patients are involved- worries about life expectancy run deeper here. Fertility sparing options and effective counseling will help patients make their own decisions rather than the plan of management being forced onto them.

End of life care and palliation is yet another domain where support is crucial. Patients tend to understand this and living pain free and respectfully is a desire for most. Hospice care is available from many organizations and if required they can be directed accordingly. Home based care with medical supervision is a reality today and a boon for many.

Pallium India and its network is a fine example . There are many NGOs that operate out of cancer care centres providing a host of services which include financial and social support as well.

In most cases it's the question of mastery of mind over body. And we as physicians must consider ourselves fortunate to help heal both mind and body.

Dr. Deepa Joseph
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Judicious use of imaging and serum tumor markers for the preoperative differentiation of benign and malignant ovarian tumors-Go by the guidelines!

Whenever a diagnosis of an ovarian cyst is made, the first question that strikes mind of the patient as well as the Gynaecologist would be-"could this be malignant?". Following the guidelines would be a prudent path to reach the answer.

Evaluation of a premenopausal ovarian mass

RCOG and ACOG recommend a combination of transabdominal and transvaginal ultrasound as the primary imaging modality. RCOG advocates the IOTA rules for differentiation of benign and malignant lesions.

The International Ovarian Tumor Analysis group (IOTA) in 2008 devised simple ultrasound rules to differentiate between benign and malignant tumors preoperatively.

This preoperative classification system for ovarian tumours consisting of:

- 5 features typical for benign tumours (B-features).
- 5 features typical for malignant tumours (M-Features).

B rules(Benign)		M rules (malignant)	
B1	Unilocular cyst	M1	Irregular solid tumor
B2	Presence of solid components with largest diameter <7mm	M2	Presence of ascites
B3	Presence of acoustic shadows	M3	At least 4 papillary structures
B4	Smooth multilocular tumor with largest diameter <10 cm	M4	Irregular multiloculated solid tumor with largest diameter>10 cm
B5	No blood flow in doppler (colour score 1)	M5	Very strong blood flow

Rule 1: If one or more M features are present in the absence of B feature(s), the mass is classified as malignant.

Rule 2: If one or more B features are present in the absence of M feature(s), the mass is classified as benign.

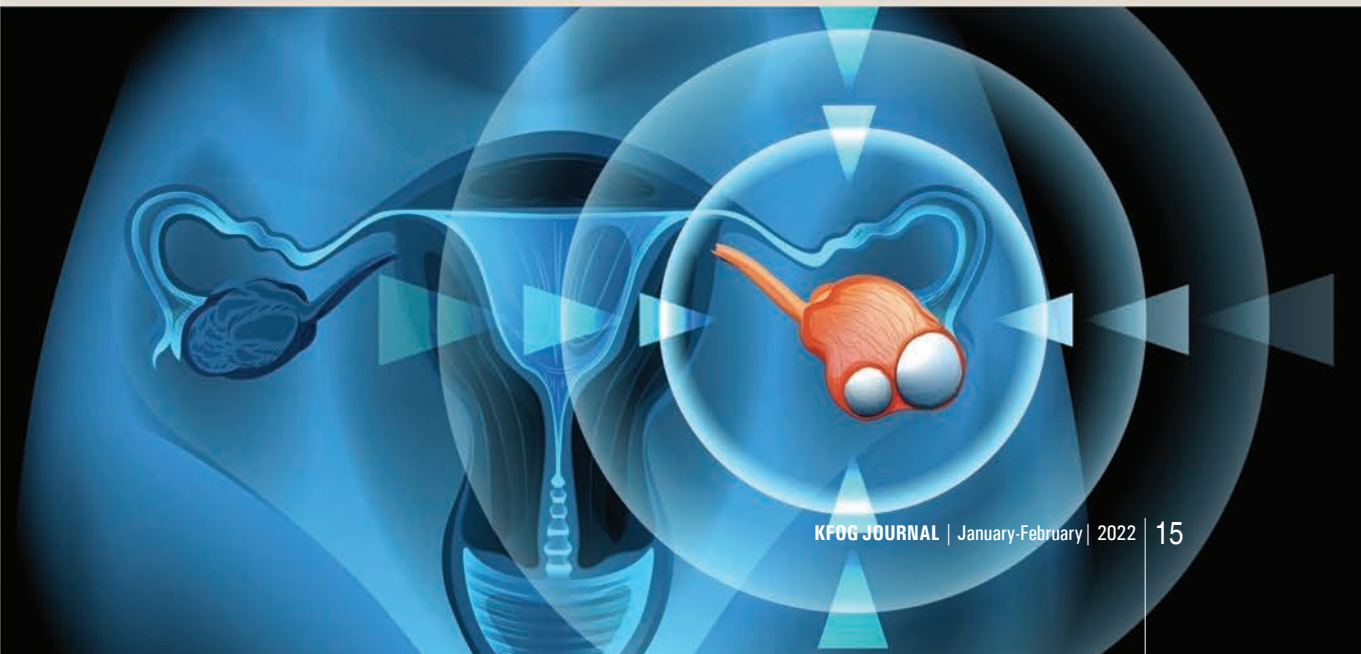
Rule 3: If both M features and B features are present,or if no B or M features are present, the result is inconclusive and a second stage test is recommended.

Studies have found that when the simple rules were applied, they were conclusive in approximately 75% of adnexal masses.

Other features of malignancy include focal thickening of the cyst wall and thick and irregular sepatae >3mm.Borderline and early invasive ovarian cancer often have similar radiological appearance.

RCOG recommends CA-125 as the tumor marker for primary evaluation of a premenopausal ovarian mass. Normal value is < 35IU/L. Approximately 85% of patients with epithelial ovarian cancer have CA-125 levels greater than 35 IU/L but elevated levels are found only in 50% of patients with stage I disease. ACOG considers Ca-125 less valuable in the evaluation of premenopausal ovarian cysts due to its low specificity and high false positive rates.

RCOG recommends the calculation of Risk Malignancy Index(RMI) I to estimate the risk of malignancy.



The RMI I combines three presurgical features. It is a product of the serum CA125 level (iu/ml); the menopausal status (M); and an ultrasound score (U) as follows: RMI = RMI = U x M x CA 125

The ultrasound result is scored 1 point for each of the following characteristics: multilocular cysts, solid areas, metastases, ascites and bilateral lesions.

U = 0 (for an ultrasound score of 0) U = 1 (for an ultra sound score of 1) U = 3 (for an ultrasound score of 2–5)

The menopausal status is scored as: 1 = premenopausal, 3 = postmenopausal

RMI I score with a threshold of 200 has 78% sensitivity and 87% specificity.

RCOG does not mandate CA-125 for a sonologically simple ovarian cysts.

Both RCOG and ACOG recommends CA125,AFP,beta HCG and LDH for women under 40 years with a complex ovarian mass because of the possibility of Germ cell tumors.

Postmenopausal ovarian tumors

ACOG &RCOG recommend serum CA125 and abdominal and transvaginal ultrasound for the primary evaluation of a postmenopausal ovarian cyst. There is no enough evidence to support routine use of other tumor markers.

Malignant germ cell tumor	AFP	HCG	
Dysgerminoma	-	-	LDH&PALP may be+
Embryonal carcinoma	+	+	
Choriocarcinoma	-	+	
Endodermal Sinus tumor	+	-	
Immature teratoma	-	-	

Role of MRI

Contrast enhanced MRI is the preferred advanced modality for an ultrasound indeterminate adnexal lesion when early stage disease is suspected due to its excellent soft tissue contrast resolution. MRI is better than ultrasound or CT in detecting small peritoneal metastasis. However, it will not differentiate between borderline and invasive tumors.

Role of CT

CT is indicated when advanced ovarian cancer is suspected. It can predict the possibility of optimal cytoreduction and inoperability.

Judicious and careful evaluation using the appropriate tumor markers and imaging modalities will help in early identification of malignancy, proper planning of the primary surgery and timely referral of indicated patients. This not only saves time and expense but precious lives too!

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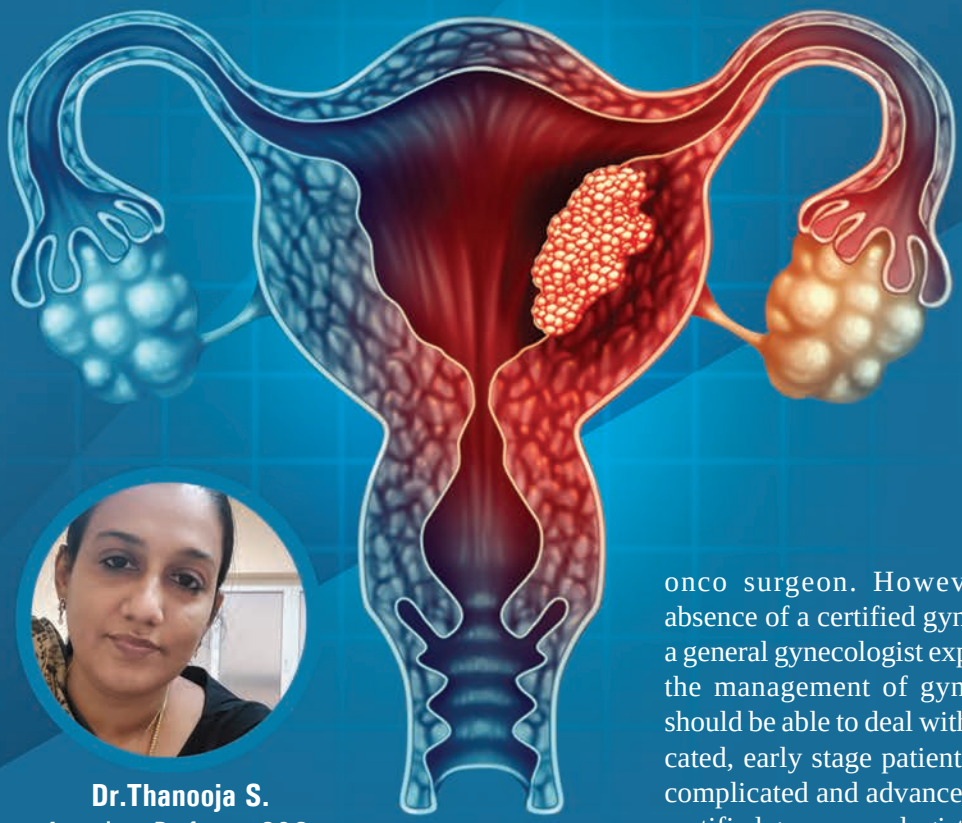
WHO WILL BELL THE CAT?

OVARIAN CANCER AND ENDOMETRIAL CANCER



Dr.Thanooja S.
Associate Professor O&G,
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General Gynaecologist or Gyne oncologist?

Different studies and reviews have been done in this regard, considering the different aspects like - the extent of the surgical staging procedures and completeness of cytoreduction - with survival benefit in patients with ovarian cancer. These studies show a definite survival advantage for patients up to 12 months in ca ovary when operated by a gynec oncologist.

But since there is shortage to the availability of properly trained personnel, in practice it may not be always feasible that all cases are attended by a gynec onco surgeon. However, in the absence of a certified gyn oncologist a general gynecologist experienced in the management of gynec cancers should be able to deal with uncomplicated, early stage patients, and refer complicated and advanced cases to a certified gynec oncologist.

Carcinoma Endometrium

Pre-operative histopathological type, grade and the extent of myometrial invasion are the important factors which are needed to decide on the extent of primary surgery.

A pre-operative contrast enhanced MRI of pelvis and abdomen will give you the information regarding depth of myometrial invasion, cervical involvement and lymph node involvement with about 90% accuracy.

Vast majority of cases are Endometriod adenocarcinomas (80-90%) and about 10-20% have non-endometriod aggressive carcinomas

like serous and clear cell carcinomas.

In stage 1A low grade (1&2) endometriod adenocarcinomas, total hysterectomy with bilateral salpingo oophorectomy is the recommended treatment. Lymphadenectomy is not recommended as the chance of lymph node involvement is negligible. These cases can be operated by general gynec surgeon.

Trials have shown that **laparoscopic procedures** are non-inferior to open procedures in expert hands. Hence they can be operated via MIS as well. But avoid the use of myoma screws and morcellation of the specimen.

In Intermediate risk lesions (Grade 1, 2 EM with > 50% MM invasion, or grade 3 with <50%MM invasion) lymphadenectomy **can be done** for staging purposes.

In high risk category (Grade 3 lesions, and >50 % of myometrial involvement/ non-endometriod histology) bilateral pelvic lymphadectomy + para aortic up to left renal vein needs to be done. Minimum nodal count of 10-12 lymph node count is considered as an adequate procedure. So, if expertise and facilities for lymphadenectomy is not available, these patients should be referred to a gynec onco surgeon.

Therapeutic benefits of lymphadenectomy in ca endometrium is still not clear. Data from two RCTs by Panici et al and ASTEC trials could not demonstrate a survival advantage of lymphadenectomy. However, large retrospective data from US and the SEPAL trial showed survival advantage of lymphadenectomy in high risk endometrial histologies.

Lymph nodal evaluation if turns positive, the patient will be upstaged to stage 3C and will receive adjuvant chemotherapy as a part of treatment which will add to the survival advantage. **Hence a lymph nodal status will be of utmost importance in deciding on the adjuvant treatment.**

As lymphadenectomy is associated with post-operative morbidity due to formation of lymphedema and lymph cysts in some , recent recommendations advise the use of **sentinel node mapping** in intermediate and high risk endometrial cancers. This will definitely reduce the post op morbidity of full lymph node dissection and hence can be considered in centres with facility for it. **Laproscopy/ robotic surgery with sentinel node mapping** using ICG has also become popular nowadays and such options can be thought of in appropriate patients.

In papillary serous carcinoma of endometrium, infra colic omentectomy should also be done.

In stage 2 ca endometrium with obvious cervical involvement, type III radical hysterectomy is recommended for obtaining free margins.

In stage 3&4, a multi-modality treatment including cyto reductive surgery, chemo therapy and radiation may be needed to improve the overall survival. Hence these patients should be treated in an oncology unit to improve the outcome.

Ca ovary

Ca ovary most commonly is a disease in post-menopausal age group and majority of the patients present in advanced stage of disease. Initial evaluation of patients, apart from thorough clinical examination, should include tumour markers (Ca 125+ CEA) and CECT evaluation of abdomen and pelvis to assess the origin of mass and the extent of disease.

Surgical management of early stage ovarian cancer-

In early ca ovary, staging laparotomy via a midline incision should be done. Avoid rupture and spillage of tumour as far as possible because it can upgrade the stage from IA to IC1 with possible requirement of chemotherapy in otherwise unindicated patient. Availability of frozen section in

doubtful cases will be of definite help in allowing all necessary surgical procedures at initial evaluation itself. When operating on a young patient in whom conservative surgery is needed, frozen section should be arranged.

In early stages the procedure should include collection of peritoneal cytology, TAH + BSO + thorough exploration of abdominal and peritoneal cavities, multiple peritoneal biopsies, bilateral pelvic and para aortic lymphadenectomy and infracolic omentectomy. Around 15% of cases of so called early stage ca ovary will be upstaged to stage 3A due to lymph node positivity in final HPR.

If comprehensive surgical staging was not done, we are likely to miss cases who require chemo therapy post operatively finally affecting their prognosis.

In advanced ca ovary stage

In advanced cases the feasibility of complete cyto reduction/upfront surgery should be assessed by the surgeon with help of CECT imaging. Often upfront surgery requires extensive surgical procedures to achieve complete cyto reduction for which a good anaesthesia support and dedicated post-operative ICU care is mandatory.

Patients not suitable for upfront surgery due to poor general condition or extensive disease are treated by neo adjuvant chemo therapy followed by interval cyto reduction after 2-3 cycles. Again the aim is complete cyto reduction which may require peritonectomy, excision of enlarged nodes, bowel resection anastomoses etc. which need expertise and training in the field. Hence advanced carcinoma ovary surgery should be done by a trained or certified gyne oncologist.

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BREAST CANCER.... AN ENIGMA FOR THE GYNECOLOGISTS ?

Dr. Agnes Mathew MD. FICOG, ACME.
Consultant Gynecologist, Muvattupuzha
Retired HOD and Former Dean MEU,
Founder President of MOGC and MOGS

Introduction: Breast cancer (BC) is the leading cause of cancer death in women making 25% of all women with cancer. Life time risk for invasive BC is 13% and death rate is 6.9% (*GLOBOCAN 2020*) Breast cancer arises in the epithelium of the ducts (85%) or lobules (15%) in the glandular tissue as "in situ" with no symptoms. It progress to locally invasive breast cancer/IBC, regional metastasis to lymph nodes and distant metastasis to bones, liver, lungs and brain. Women die of metastasis and not due to primary lesion in breast. Prevention by risk reduction and early detection with effective

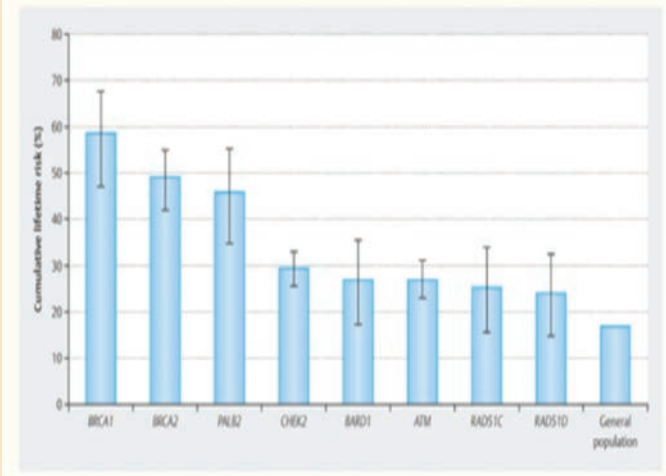
treatment reduces morbidity and mortality. The role of Indian OBGYN in prevention of BC deaths is supreme because women meet gynecologists giving an opportunity for building breast awareness, CBE and early detection. Five year survival rate of early detection is 99% but drops to 27% if late diagnosis.

Primary prevention by risk screening and risk reduction

Gail model	Claus model	BRCAPRO model	Tyrer-cuzick model	BOADICEA model

● Age of the person
● Age at menarche
● Age at first live birth
● Breast biopsies (AH)
● Family history
  ● First-degree relatives
	● Age of the person
	● Age at menarche
	● Age at first live birth
	● Family history
	  ● First- degree relatives
	  ● Second-degree relatives
		● Age of the person
		● Family history
		  ● First- degree relatives
		  ● Second- degree relatives
		  ● Third- degree relatives
		  ● Age at onset of breast cancer
		  ● Bilateral breast cancer
		  ● Ovarian cancer
		  ● Male breast cancer
			● Age of the person
			● Body mass index
			● Age at menarche
			● Age at first live birth
			● Age at menopause
			● Hormone replacement therapy use
			● Breast biopsies (AH, LCIS)
			● Family history
			  ● First- degree relatives
			  ● Second- degree relatives
			  ● Age at onset of breast cancer
			  ● Bilateral breast cancer
			  ● Ovarian cancer
				● Age of the person
				● Family history
				  ● First- degree relatives
				  ● Second-degree relatives
				  ● Third- degree relatives
				  ● Age at onset of breast cancer
				  ● Bilateral breast cancer
				  ● Ovarian cancer
				  ● Male breast cancer

AH, atypical hyperplasia; LCIS, lobular carcinoma in situ; BOADICEA, breast and ovarian analysis of disease. incidence and carrier estimation algorithm.

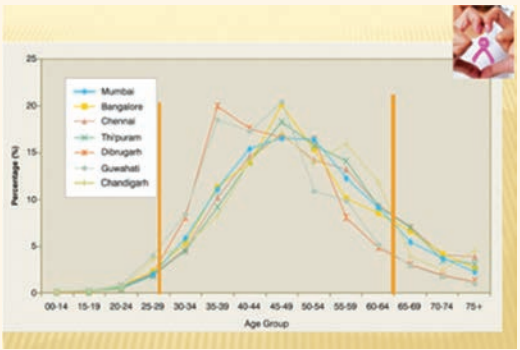


T-C model (IBIS model) is used for determining risk of BC based on woman's age, race, reproductive factors and family history, in first-degree relatives (parents, siblings, and children) and second-degree relatives (aunts and cousins) on both sides of the family plus the age of onset. The risk is 1.75 if one first degree relative and 2.5 if 2 first degree relatives have had BC. Genetic inheritance explains 40% of familial risk. Risk genes are

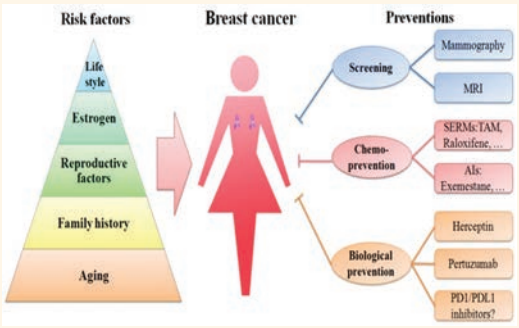
divided into High, (BRCA1, BRCA2, PALB 2) Moderate (BARD1, ATM, RAD51C, RAD51D, TP53) and Low penetrance.

High BMI in the postmenopausal women correlates as risk factor for BC with poor prognosis. High glycemic index and high glycemic load are high risks independent of obesity. Alcohol consumption triggers the estrogen receptor pathways.

As age advances risk increases, but maximum risk is in 40-60 years. (99.3 % & 71.2%) Hence age for screening should start before 40 years for prevention.



Female gender is strongest BC risk factor. (0.5-1% BC in men) Reproductive factors like early menarche, late menopause, late age at first pregnancy, low parity and less number of years of breast feeding increase BC risk, strongly associated with ER status. Estrogen when used for postmenopausal HT is proven risk, (WHI 2003)



Lifestyle modifications that reduce the risk of breast cancer include: prolonged breast feeding; weight control by regular physical activity; (3-7 hours/week); low calorie, low CHO diet, avoidance of alcohol and tobacco smoke; and avoidance of prolonged use of hormones. This could reduce risk by 30% to 80%

Secondary prevention by early detection through screening in population without symptoms. Schedule for screening depends on risk calculation which could be done for women > 30 years in all gyne OPDs by questionnaires and attached to the file.

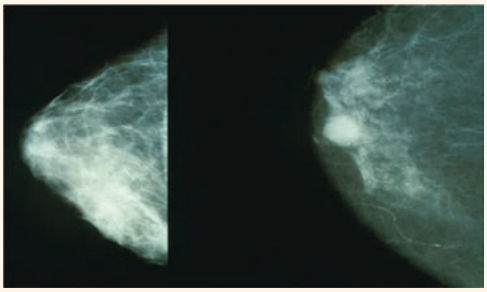
Schedule for Screening (adapted from Curr. Onco.June 2018)

High Risk	Low risk
20-30 years – Monthly SBE (Self Breast Examination)	30-40 years – 3 monthly SBE (Self Breast Examination)
30-35 years – 6 monthly CBE (Clinical Breast Examination)	40-45 years – yearly CBE (Clinical Breast Examination)
>35 years - Annual imaging	>45 years – 5 yearly imaging

American Cancer Society (ACS) no longer recommends BSE or CBE. Attention should be focused on breast awareness and breast health promotion for early detection. Breast self-examination is simple, economical method for early detection if changes observed are reported. For low resource situations, clinical breast examination can detect 86% of lesions and sensitize women regarding disease. CBE should be part of the physical examination for each woman – pregnant, infertile or 40+

Mammography the screening method for BC, uses low energy X-rays to obtain high-resolution images of the breast, detects tumor confined to breast and amenable to easy treatment. Limitations of traditional film mammography in detecting dense breasts, is

overcome in digital mammography. Testing is short, painless and does not require contrast-enhancing agent.



Direct breast ultrasonography is allowed only as an adjuvent imaging to mammography. It is less expensive and accurate if done by a skilled operator. It is more sensitive for dense breast tissue, even though with more false positive results.

MRI is more sensitive (less specificity) than mammography in high-risk women, not affected by breast density, detecting occult primary BC, axillary nodal metastasis, residual tumors after therapy upto 0.5mm.

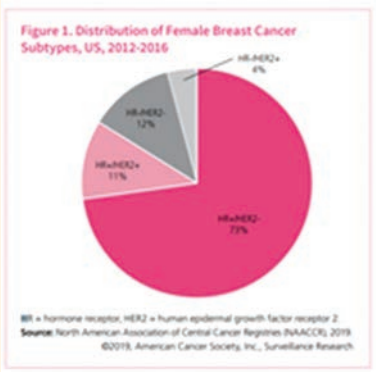
Other screening/diagnostic methods are Digital Breast Tomosynthesis (DBT) (2011 FDA), positron emission mammography (PEM) contrast-enhanced spectral mammography (CESM), Molecular breast imaging (MBI), breast-specific gamma imaging (BSGI), optical imaging, electrical impedance imaging (EIT), elastography. (ACS, October 2019)

Chemoprevention to inhibit development of IBC or arrest/reverse progression of premalignant cells, include SERMs and aromatase inhibitors (AI) when the tumor is ER+.

Bioprevention by monoclonal antibodies targeted at HER2 protein overexpression, has unacceptable toxic side effects. PDL 1 (Programmed cell Death receptor Ligand 1) inhibitor drugs were effective in 27 TNBC (triple negative) patients - 20% CBR (Clinical Benefit Rate), AR inhibitor -19% CBR (Clinical Benefit Rate) in ER/PR negative BC.

When prevention is not possible, gynecologists will come across early invasive cancers with symptoms such as breast lump or thickening; alteration in size, shape or appearance of a breast; dimpling, redness, pitting or other alteration in the skin; change in nipple appearance or alteration in the areola; and abnormal nipple discharge. Diagnosis should be facilitated by imaging and biopsy, with proper counselling and timely reference.

There are 4 main molecular types



AJCC staging system, used in clinical management, updated January 2018, has anatomic stage based on extent, prognostic stage by information on ER, PR, HER2 and/or HER2+/HER2- status, and grading. Oncotype DX test measure aggressiveness in early stage cancer to decide on chemotherapy on a score 0 - 100

Treatment decisions are made after consideration of stage, biological characteristics, age, reproductive needs and risks/benefits of each option. In early stage, partial mastectomy or lumpectomy with sentinel node sampling is sufficient. Advancements in radiotherapy and chemotherapy as neoadjuvant or adjuvant having less side effects has reduced morbidity. This message also has to reach the population along with the risk reduction, and screening schedules, through commitment of us Gynecologists.

FERTLITY PRESERVATION IN GYNAEC ONCOLOGY

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INTRODUCTION

The diagnosis of cancer is devastating especially when it happens in a young lady who has not borne children. This is because the treatment of gynecological cancer by surgery, chemotherapy or radiation is going to result in permanent infertility. Hence, fertility preservation is one of the major demands in patients less than the age of forty seeking cancer treatment.

The three most common gynecological cancers are those of cervix, ovary and endometrium.

Although these are common in elderly women, 40% of cancer cervix, 12% of cancer ovary, 5% cancer endometrium occurs in women of reproductive age group.

CANCER CERVIX

Fertility preservation is possible in early cervical cancer including cancer in situ, microinvasive cancer, and stage 1B cancers less than 2 cm size. CIN (cervical intraepithelial neoplasia) and cancer in situ are treated by LEEP (loop electrosurgical excision procedure)

Stage 1 A1 (microinvasive cancer with depth of stromal invasion less than 3 mm) cancer is effectively treated by cervical conization.

Stage 1 A1 cervical cancer with lymph vascular space invasion, stage 1 A2 cancers and stage 1 B1 cancers less than 2 cm, the fertility preservation surgery of choice is radical trachelectomy. Radical trachelectomy involves removal of cervix with medial parametrium and upper 2cm of vaginal cuff , retaining the uterus and adnexa to allow future pregnancy.

CANCER OVARY

Fertility preservation is possible in germ cell tumors, borderline tumors, sex cord stromal tumors, and even early epithelial ovarian cancer.

Germ cell tumors are treated by unilateral salpingo oophorectomy with comprehensive surgical staging. Extraovarian disease is treated by chemotherapy using bleomycin, etoposide and cisplatin.

Borderline tumors are treated by unilateral salpingo oophorectomy in unilateral tumors, in bilateral tumors, ovarian cystectomy preserving normal ovarian tissue is done. Sex cord stromal tumors are also treated likewise.

ACOG (American College of Obsterics and Gynaecology) recommends fertility preservation for stage 1A cancer ovary, Grade 1 or 2 with non-clear cell histology. Along with conservative surgery, a thorough surgical staging including pelvic and para aortic lymphadenectomy, multiple peritoneal biopsies, and omentectomy is performed.

ENDOMETRIAL CANCER

Although seen commonly in older women, 25% patients are premenopausal and 5% are below 40 years. Cancer endometrium in young patients occur due to a hyper estrogenic milieu. The precursor for cancer is atypical hyperplasia. Atypical endometrial hyperplasia is treated with high dose progesterones with a 94 % regression rate. If the tumor does not invade the myometrium with no enlarged lymph nodes and no synchronous ovarian tumor, the patient can be given high dose progesterones. Megestrole 160 mg / day or Medroxy progesterone acetate 200-400mg/day is continued for 9-12 months. Instead of oral progestrones, GnRH analogues are also effective. Levonorgestrol intrauterine devices (LNG IUD) considering their local effect on

the endometrium with less systemic side effects are also effective in treating early cancer endometrium. 70% tumors respond to progestrones but 25% relapse after initial response.

CONCLUSION

Preservation of fertility is an important concern in patients with gynecological cancers including those of cervix, ovary and endometrium. For fertility preservation, patients should be carefully selected and extensively counselled regarding the deviation from the standard of care, the oncologic risks, and the subsequent likely need for reproductive technologies to ensure conception.

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