Objective: To see the awareness about cancer in women among ASHA workers.
Place of Study: Awareness Sessions at Safdarjung Hospital, New Delhi.
Background: ASHA workers are the first point of contact for women in the community & bridge the back between the hospital and women. They have been instrumental in the success of the family planning programme & polio eradication program in India.
Materials and Methods: A questionnaire about educational status, awareness about breast & cervical cancer statistics, methods of screening and diagnosis was distributed to Accredited Social Health Activists appointed by the government at two educational sessions organized at Safdarjung hospital.
Results: Of the 200 ASHA workers attending, 188 completed the questionnaire. Their educational status ranged from 7th standard to post-graduate, majority had studied up to 10th standard. Their sources of information were mostly television and mobile phones, 23% had knowledge about internet, 36% were using Whats app. Only 28% knew about the commonest cancer in Indian women. Regarding breast cancer, 63% were aware of self examination of breasts, 41% knew the frequency of self examination; awareness about symptoms of breast cancer was prevalent in 46%, 24% knew about risk factors of breast cancer. Regarding Cervical Cancer, 28% knew about risk factors, 22% knew about symptoms of cervical cancer; 19% knew about screening methods for cervical cancer, 9.5% knew the screening intervals.
Conclusion: Health education about cancer prevention should start at the primary school level. Special educational & motivational sessions for ASHA workers could help in cancer prevention programs.

Cervix: Oral Abstract

Evaluation of biomarkers p16^{ink4a}/ki-67 in cervical cytology for diagnosis of cervical intraepithelial neoplasia

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Background: Novel biomarkers, P16^{INK4a}/Ki-67 are disease specific and identify risk of progression to cervical cancer.
Aim: To test the clinical utility of biomarkers p16^{INK4a}/Ki-67 in cervical intraepithelial neoplasia.
Methodology: Experimental study was conducted over an 18 month period at a tertiary care hospital. 3500 sexually active women between 30-55 years were screened by VIA/VILI, Pap test & HPV-DNA PCR. All screen positive women (n=280) underwent colposcopy and biopsy if required. At the time of colposcopy repeat cervical smear were taken for evaluation of p16^{INK4a}/Ki-67. Immunocytochemistry for p16^{INK4A} and Ki-67 was done by partitioning one slide into two parts for each biomarker. For p16^{INK4A} positivity, nuclear +/- cytoplasmic scoring and intensity score was calculated and final score obtained. For Ki-67 staining was exclusively nuclear. Staining patterns were categorized as negative, intermediate or strongly positive.
Results: 86 women with abnormal cytology were evaluated with p16^{INK4A}/Ki-67 immunocytochemistry and 20.9% (n=18) and 18.6% (n=16) were positive for each biomarker. For ASCUS (n=42) and LSIL (n=23) smears, specificity and NPV were 100% with a likelihood ratio (LR+) of 27 and 25 respectively suggesting good diagnostic accuracy. The combined sensitivity and specificity of p16^{INK4a}/Ki-67 in detecting CIN-2+ lesion was 76.9% and 95.8% respectively with LR+ of 18.72 in high grade smears.
Conclusions: p16^{INK4A}/Ki-67 evaluation in cervical cytology are valuable biomarkers in ruling out or detecting CIN2+ in ASCUS and LSIL smears. Unnecessary intervention in large number of low grade smears can be avoided by applying these biomarkers. In high grade smears detection rate of biomarkers p16^{INK4A}/Ki-67 was high and had a good diagnostic accuracy.

Cervix: Oral Abstract

IMRT in carcinoma cervix: Maximizing the gain and nipping the side effects: RGCI experience

Objective: To present a single institutional experience with acute toxicity, patterns of failure and survival in carcinoma cervix treated using definitive radiotherapy with IMRT technique.
Methods: It is a retrospective analysis of 64 patients with carcinoma cervix treated with definitive chemoradiation (IMRT) from April 2011 to Jan 2013. Patients with squamous or adenocarcinoma histology and no metastasis, treated with definitive radiotherapy (IMRT) with or without concurrent chemotherapy were included. Acute toxicities were presented as proportions and kaplainmeier computation was done to calculate 3 years disease free survival (DFS) and 3 years overall survival (OS).
Results: Median follow up was months for the entire cohort. Mean age was 55.9 years (SD 9.93). Majority of patients (92.8%) had locally advanced disease (FIGO II and III) and squamous cell carcinoma (96.9%). Mean dose to pelvis with IMRT was 49.75 Gy (SD 1.78) followed by ICRT, EBRT boost and implant in 79.7%, 17.2% and 3.1% respectively (as indicated). Response evaluation done at 3 months of treatment completion showed 83.6% complete response, 11.5% partial response and 4.9% progressive disease. During follow up 21.6% developed recurrence - 44.4% failed locally, 16.7% at para-aortic nodal region and 38.9% at distant sites. The 3 year DFS and OS was 70.8% and 60.3% respectively. Patients had tolerable acute toxicities. Incidences of grade ≥3 acute toxicity were 3.1% for anemia, 10.9% for neutropenia, 25% for thrombocytopenia, 1.5% for nausea, 0% for vomiting, 12% for GU and 12% for GI toxicities. Incidence of grade I, II and III radiation dermatitis were 38.89%, 27.78% and 22.2% respectively. None developed grade IV radiation dermatitis.
Conclusion: IMRT for carcinoma cervix seems to provide improved outcomes and toxicity profile, although it should be compared with conventional radiotherapy in a well randomized control setting so as to have true and meaningful comparison.

Cervix: Poster Abstract

Comparison between cystoscopy and CT scan findings of bladder involvement in carcinoma cervix in view of revised FIGO staging

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Aim: To compare the findings of CT scan pelvis and cystoscopy findings of bladder involvement in carcinoma cervix in VIEW of revised FIGO staging and to demonstrate the accuracy of CT scan for pretreatment diagnosis of bladder involvement.
Methods: A prospective and comparative study was conducted in the department of Obstetrics and Gynaecology, Rajindra hospital Patiala on a number of 100 patients of carcinoma cervix who underwent both cystoscopy and CT scan pelvis to ascertain bladder involvement. Cystoscopy guided biopsy proven cases of bladder involvement were taken as true cases of bladder involvement in the study and the results of both modalities were analysed and compared.
Results: Out of 100 patients of carcinoma cervix, 28 patients showed bladder involvement on CT scan pelvis and 6 patients were proven as positive cases on cystoscopic guided bladder biopsy. The true positives in the study were 6 cases. True negatives were 94 cases. 22 patients were false positive on CT scan findings and there were no false negative patients for bladder involvement on CT scan pelvis findings in the study. The sensitivity, specificity, positive predictive value, negative predictive value and accuracy of CT scan pelvis for bladder involvement were 100%, 76.60%, 21.43%, 100% and 78% respectively. CT scan pelvis was able to detect all cases of bladder involvement which came positive cystoscopy guided biopsy as well.
Conclusions: With the revised FIGO staging which has given optional status to both CT scan and cystoscopy for bladder involvement in patients of carcinoma cervix, CT scan can be used as the preliminary modality for detective bladder involvement in patients of carcinoma cervix. The high sensitivity and negative predictive value of CT scan helps choose which patients should undergo cystoscopy and helps in better and more efficient pre-treatment evaluation of patients with carcinoma cervix for bladder involvement.

Cervix: Oral Abstract

Association of TNF-α rs-281865419 polymorphism with reproductive tract infections in Indian population

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Aim: To investigate the presence of reproductive tract infections (RTIs) in symptomatic and asymptomatic women in North India and association of SNPs in TNFα gene (rs-281865419 C/T) with susceptibility to these RTIs.
Methods: We collected 100 symptomatic (cases) and 100 asymptomatic women (controls) samples and screened them for RTIs. Then genotyping of TNF-α gene was performed by PCR-RFLP.
Results: Among cases the frequencies of RTIs infection is higher than control. The prevalence of HPV, *C. trachomatis, T. vaginalis*, Bacterial vaginosis and *N. gonorrhoeae* are 28% & 6%; 11%, 32% respectively while in controls it was 5%, 2%, 1% and 8% & 1%. In the present study we found that the frequency of wild homozygous genotype (TT) was lower in cases 30% (6/20) as compared to controls 60% (12/20). The frequency of the heterozygous polymorphic genotype (CT) was higher in cases 65% (65/100) as compared to controls 32% (32/100). It was interesting to note that the frequency of the polymorphic homozygous genotype (CC) was higher in cases 15% (15/100) than controls 2% (2/100). While the frequency of the carrier genotype (CT + TT) was found to be more in cases 70% (70/100) than in controls 40/100 (40%). This study shows that T allele may be risk factor for Reproductive tract infections as its percentage is higher in cases as compare to normal controls.
Conclusion: TNF-α rs-281865419 locus may serve as an important biomarker for RTIs predisposition in Indian population though larger sample size is needed to validate the findings.

Cervix: Oral Abstract

Chemoradiation for the management of locally advanced carcinoma uterine cervix: Comparative evaluation of concomitant weekly versus three weekly cisplatin

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Aims and Objectives: To determine and evaluate the difference/s, in terms of tumor control and side effects, between weekly and three weekly cisplatin concomitant with external beam radiotherapyfor locally advanced carcinoma of cervix.
Materials and Methods: The study was conducted in Radiotherapy Department, University of Health Sciences, Rohtak (India), on sixty previously untreated, histopathologically proven patients of locally advanced carcinoma of uterine cervix. The patients were treated with External Beam Radiotherapy (EBRT) 50 Gy/25 fractions over 5 weeks and concomitant cisplatin, followed by intra-cavitary HDR brachytherapy (ICBT) 700 cGy to point A; three times, once in a week. The patients were assigned randomly either of two groups of 30 patients each. In Group I (Study Group) the patients received three weekly cisplatin 75 mg/m^2 for 2 cycles whilein Group II (Control Group) the patients received weekly cisplatin 40 mg/m^2 for 5 cycles. Evaluation of response and toxicity was done weekly during treatment and monthly thereafter up to six months. The data thus obtained was assessed and analysed using La Morte statistical tool. The study was approved by Ethical committee of the institute and quality was periodically monitored by senior consultant and guide.
Results: Stage wise disease response in study and control respectively at the end of treatment was as follows: Stage IIA-CR (80% vs 100%), PR (20% vs 0%); Stage IIB-CR (80% vs 76.47%), PR (20% vs 23.53%); Stage IIIA-CR (60% vs 100%), PR (40% vs 0%); Stage IIIB-CR (60% vs 60%), PR (40% vs 20%), NR (0% vs 20%). Stage wise disease status at the end of sixth month follow up was as follows: Stage IIA – NED (80% vs 100%), RD (20% vs 0%); Stage IIB – NED (80% vs 76.67%), RD (20% vs 23.53%); Stage IIIA – NED (60% vs 100%), RD (40% vs 0%); Stage IIIB - NED (60% vs 60%), RD (40% vs 40%). Tumor response was not significantly different in the two groups with respect to age distribution, rural/urban distribution, histopathological distribution and treatment interruption. Maximum level of hematological toxicity (WHO criteria) observed in study and control group respectively at the end of treatment was as follows: Anaemia; Grade II - 4 (13.33%) in both the groups, Leukopenia; Grade II - 1 (3.33%) vs 0 (0%). The worst acute skin reactions observed by the end of treatment in Group I and II respectively were grade II - 2 (6.67%) vs 0 (0%). The worst acute mucosal reactions were grade II - 5 (16.66%) vs 0 (0%). Upper Gastrointestinal toxicity (Grade II & III) was 16.7% versus 13.3% respectively. Lower gastrointestinal toxicity (Grade II & III) was 30.0% versus 36.7%. No significant weight loss was observed in either of the groups. Though, all the patients completed the intended treatment, treatment interruption for more than a week was observed in 10 (33.33%) vs 8 (26.67%) patients respectively, due to acute toxicities.
Conclusion: Three weekly cisplatin, concomitant with radiation seems to be the potential, effective and acceptable alternate as standard of treatment for locally advanced carcinoma cervix; especially for increased work load and limited resource setups.

Cervix: Oral Abstract

To evaluate the role of training session on 'Cervical Cancer Screening' in improving knowledge and attitude of Accredited Social Health Activists (ASHA) in East Delhi population

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Background: India has the world's largest load of cervical malignancy. A lot of it can be attributed to lack of cervical cancer screening awareness among the general population. The Accredited Social Health Activists (ASHA) are grass root workers who have good reach in the remote areas, where health care facilities are lacking. Training these ASHAs may increasethe general awareness about cervical cancer screening.
Methods: We organized a training programme of 250 ASHA workers in a tertiary care hospital with aim of improving their knowledge and attitude about cervical cancer screening which will eventually improve their practise of training women in general population. It comprised of 5 lectures in language they understand, slogans, posters, question answer session etc. A test comprising of 17 questions was conducted before and after session to check their knowledge and attitude.
Results: There was an overall improvement of 25% in knowledge of the ASHAs i.e. 38% answers were correct in pre-test and 63% were correct in post-test. Questions were pertaining to symptomatology, risk factors, screening methods, their utility and prerequisites of performing the screening tests, when and how often to repeat. Improvement was seen in all the areas. There was improvement in attitude too and most of them wanted themselves (98%), their relatives (100%) and the woman within their area (98%) to be screened for cancer cervix.
Conclusion: It was a small initiative and successful result was obtained after the training session of ASHAs. The impact on general population needs further evaluation.

Cervix: Poster Abstract

Neo-adjuvant chemotherapy followed by surgery versus definitive chemo radiation as treatment for localized carcinoma cervix

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Background: Cervical cancer is ranked as the most common cancer in Indian women, second most common cancer worldwide and the leading cause of death in the developing countries. In the developing countries majority of the patients are diagnosed at locally advanced stages. The standard treatment of locally advanced cervical cancer is concomitant chemoradiation (CTRT) using platinum based chemotherapy. However, some randomized studies have shown improved results for patients receiving neoadjuvant chemotherapy (NACT) followed by surgical resection in comparison to patient receiving radiation alone. The present study was designed to compare response to the treatment and survival of and NACT followed by radical surgery (RS)