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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