INTRODUCTION

Cancer of cervix accounts for more cancer deaths than any other cancer deaths in third world countries. It is one of the leading causes of cancer related deaths in women in the United States. To detect cancer of cervix at an early stage various screening procedures have been tried. It needs extended educational programmes and financial resources to promote adequate cytological screening of the target population with the aim of reducing suffering and deaths from squamous carcinoma of cervix.

Histologically, 85-90% of cervical cancers are squamous cell origin and the rest are adenocarcinoma. The incidence of cervical cancer in women is between the age of 35 and 55 years. The cause of the disease, specially in cases of squamous cell tumors appears to be sexually
transmitted. It has the same risk factors as those of sexually transmitted diseases, such as early age at first intercourse, multiple sexual partners, low socio-economic group, smoking and a history of sexually transmitted diseases. However, the risk factors in cases of adenocarcinomas, appear to be different. Sexual transmission does not appear to be a causative factor and instead use of oral contraceptives, though not established, has been associated with higher risk of adenocarcinoma. The adenocarcinoma of cervix arises from the endocervical epithelium, within the endocervical canal. It, therefore, has a chance of getting missed by Papanicolaou (Pap) smear screening. It is more silent and is likely to be diagnosed at a later stage.

Very early tumors are occult or at the most give symptoms like postcoital watery or blood stained vaginal discharge. Beyond this stage the tumor may be ulcerated or exophytic.
Endocervical carcinomas may not be visible but the cervix is enlarge and hard on palpation.

Many screening methods are used to detect carcinoma cervix at early stage. Papanicolaou smear is the earliest and reasonably standard technique. Other screening methods employed are colposcopy, cervicography, acetic acid application, Schiller test and HPV DNA testing.

Identification of invasive cancer at an early and more curable stage contributes to the reduction in cervical cancer mortality in screened population. The identification and treatment of precancerous cervical lesions also prevents invasive disease.

The treatment of cervical cancer depends on the stage and extent of the lesion. Depending upon this chemotherapy, radiotherapy or surgery is planned. Chemotherapeutic drugs which are commonly used in treatment of cancer cervix,
apart from arresting the progress of malignancy, also cause renal and hepatic toxicity. Alteration in the levels of immunoglobulins may be noted after chemotherapy. This immuno-deficiency further aggravates the complications of the disease.

Radiotherapy, being immuno-suppressive, also causes many side effects. These therapies may lead to remission of the disease process but they seldom cure the patient. The cytotoxic drugs employed to eradicate the tumor cells also have injurious effects on the normal cells, decreasing their immunological capacity, thus increasing the susceptibility of the patient to malignancy and metastasis further.

The commonly used chemotherapeutic drugs are Cisplatin, Bleomycin and Methotrexate. They are either used alone or in combination. These drugs have been known to produce renal and hepatic toxicity. There is a paucity of published reports regarding
nephrotoxicity and hepatic toxicity, specially regarding changes in levels of different immunoglobins, either from single therapy or when chemotherapy is combined with radiotherapy.

The present study was planned to focus on the changes in various biochemical parameters in patients of cervical cancer undergoing treatment of cervical cancer, either with chemotherapy, or radiotherapy or a combination of both. It also incorporates the biochemical studies before, during and after treatment stages. The endeavor is to find out the relationship of these biochemical changes to different stages of the disease and the effect of subjecting the patient to different modes of treatment. The evaluation of serum creatinine, creatinine clearance, urea, glucose, bilirubin, alkaline phosphatase, SGPT, SGOT, total protein, albumin, magnesium, calcium, iron, zinc, immunoglobulins i.e. IgG, IgA, IgM were
undertaken and their values compared to normal subjects.