

cancer situation , we found that cancers of the cervix uteri constitutes 1.4% of the total number of cancers with annual number of 113 new cases of cervical cancer reported in 1995, 1996 and 1997 respectively⁽³⁾.

P53 is a tumor suppressor gene located on the short arm of chromosome 17⁽⁴⁾. Wild "normal" type P53 protein is non- mutant , has tumor suppressor effect because of its ability to inhibit transformation ⁽⁵⁾. It has a short half-life of about 20 minutes , and can not be detected in the nucleus of most normal tissues ⁽⁶⁾. The mutant type P53 protein is much more metabolically stable than the wild type and accumulates in the nucleus and has prolonged half-life (up to 9 hours) which renders it more likely to be detected by immunohistochemical assay ⁽⁷⁾. P53 gene is capable of modulating the expression of a variety of genes such as genes controlling cell arrest in G1/S phase, genes controlling apoptosis and genes controlling P53 protein ⁽⁸⁾, so functional inactivation makes the cell turn onto a one way street leading to malignant transformation ⁽⁹⁾. This inactivation could occur either due to mutations in the P53 gene (which are the most frequent mutations encountered in human tumors) ⁽¹⁰⁾ or causes other than mutations like binding and inactivation or degradation by viral proteins⁽¹¹⁾ .

Hence this study aims to assess the immunohistochemical expression of P53 in invasive cervical carcinoma (squamous cells carcinoma and adenocarcinoma) and to study the correlation between P53 over-expression with clinico-pathological variants (age, grade and histological type).

Patients and methods

A total of 42 tissue samples of invasive cervical carcinoma (30 cases of squamous cell carcinoma and 12

cases of adenocarcinoma) were included in this retrospective study.

The samples were obtained from paraffin embedded blocks covering the years 1998 to 2005 from the histopathology files of Al-Kadhimiya Teaching Hospital, Al-Ulwiya Teaching Hospital and from private laboratories. All the clinical data had been obtained from the files of these patients. Out of 12 cases of adenocarcinomas, 8 patients had punch biopsies, and 4 had hysterectomies .For the 30 cases of squamous cell carcinomas, 16 patients had punch biopsies and 14 had hysterectomies.

The diagnosis was confirmed by review of two freshly prepared hematoxylin and eosin- stained slides. Two slides had been prepared to be stained immunohistochemically with P53 monoclonal antibody. To determine the signal specificity, negative control slides were included.

In the first run, the negative control slides included sequential omission of reactive component in the test; the primary (monoclonal) antibody, the secondary antibody (the biotinylated link), the conjugate and the substrate. Then, in each immunohistochemistry run, the negative control slides were obtained by omitting the primary antibody and, this was undertaken under identical test conditions ⁽¹²⁾.

Sections from a breast cancer patient that were known to be immunoreactive for P53 antibodies were used as positive controls for P53 and run with each batch stained ⁽¹²⁾.

Positive P53 results give nuclear brownish color, granular or homogenous, without any cytoplasmic or artifactual staining as in analytic cells or hemorrhage ⁽¹³⁾. The results of P53 positivity in each individual case were analyzed according to the following variables: