

ABSTRACT

This research report studies several biochemical and histochemical aspects of cervical carcinoma and explores their use in follow-up of patients undergoing radiotherapy. Material came from 19 patients with invasive cervical carcinoma admitted to Kenyatta National Hospital. A control group consisted of 20 women matched for age who attended clinics at the hospital but were not suffering from any malignant disease; control tissue for histological examination was obtained from 3 women who had undergone hysterectomy for uterine fibroids. Biochemical assays for alkaline and acid phosphatases in patients with cervical carcinoma show an increase in alkaline phosphatase in carcinomatous tissue (35.7 umoles/hr/mg) as opposed to normal tissue (7.2). Acid phosphatase values were only moderately raised. Assays of the same enzymes in blood showed a less marked difference between patients and controls (ranges of 7.5-20.8 and 3-14, respectively). When examined histochemically, increased alkaline phosphatase activity was observed in connective tissue, epithelium of the glands and blood capillaries of tumor tissue. 1 section containing normal tissue bordering carcinomatous tissue demonstrated normal alkaline phosphatase activity in the normal tissue and increased activity in the tumor tissue. In summary, there is increased enzyme activity around the tumor areas, but values for serum levels show an overlap of normal and abnormal cases and are therefore not predictive. Results demonstrate a clear difference in activities of these enzymes in carcinomatous tissue and normal tissue, which may be of value in follow-up care