

Bcl<sub>2</sub> protein expression has been studied in many tumors including CRC. The identification of it as a sensitive prognostic marker may allow the use of adjuvant therapy in a subset of patients with worse prognosis with resultant improvement in their survival<sup>(6)</sup>.

Bcl<sub>2</sub> protein expression is mainly observed in cell populations with long life and/or proliferating ability such as duct cells in exocrine glands, basal keratinocytes, cells at the bottom of colon crypts, and neurons<sup>(7)</sup>.

The bcl2 produces its effect not by increasing the rate of cell proliferation but by reducing the rate of cell death and thus may contribute to tumorigenesis by keeping the cells alive and lending them vulnerable for further accumulation of gene abnormalities<sup>(8)</sup>.

Although **Bcl<sub>2</sub>** expression has been shown in **colorectal** neoplasia, their possible impact on the biologic behavior of the **colorectal** carcinomas is still controversial<sup>(9)</sup>.

In the present study we evaluated the expression of bcl<sub>2</sub> in colorectal carcinoma and its correlation with other clinicopathological parameters.

#### **Materials and Methods**

Thirty-five cases with **colorectal** carcinomas that had undergone colectomy were included. The clinicopathologic parameters like age and sex of the patient, tumor grade, tumor stage, tumor greatest diameter, anatomic location, histopathologic type and lymph node status were evaluated as **prognostic** indicators. Histological classification of the tumor was done according to the WHO system. The anatomic localizations were grouped as proximal colon meaning the distance from the cecum up to the splenic flexure and as distal colon beginning from the descending colon to the rectum and rectal tumors.

Four sections (with four micrometer thickness) from formalin fixed, paraffin embedded tissues were obtained, two of them were stained by H&E and revised, and the other two were stained immunohistochemically with anti **Bcl<sub>2</sub>** (Chemicon) monoclonal antibody. The IHC select<sup>®</sup> immunophosphatase secondary detection system uses biotin avidin alkaline phosphatase complexed antibodies to detect antimouse IgG in the primary antibody. The sample is then incubated with the streptavidin alkaline phosphatase solution, which binds to the biotin labeled secondary antibody present on the tissue. The chromogenic development reagent, the Red violet is then added and reacts with alkaline phosphatase attached to streptavidin biotin antibody complex. The alkaline phosphatase activity on the chromogenic substrate results in the deposit of the red insoluble precipitates at those antigenic sites containing the specific epitopes recognized by the primary antibody. The sections were counter-stained with hematoxylin. The presence of red cytoplasmic reaction at the site of the target antigen is indicative of positive reactivity. Counter stain will be dark blue coloration of the cell nuclei.

The intensity of the immunostaining was evaluated by dividing the staining reaction in four groups<sup>(10)</sup>:

Weak cytoplasmic staining intensity  
Moderate cytoplasmic staining intensity  
Strong cytoplasmic staining intensity  
Very strong cytoplasmic staining intensity

The quality of the immunostaining was evaluated as follows

**0** no positive immunostaining  
**1** less than 25% of tumor cells showing cytoplasmic positivity  
**2** 25-50% of tumor cells showing cytoplasmic positivity