Expression of bcl-2 oncoprtein in normal,hyperplastic and neoplastic endometrium

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The present work aimed to study the expression of apoptosis related protein bcl-2 quantitatively using an Enzyme immuno assay (EIA) methed in normal cycling endometrium, endometrial hyperplasias with and without atypia and endometrial adenocarcinoma to clarify their possible role in endometrial Carcinogenesis.The present study included seventy women from whom endometrial specimens were obtained at the time of D&C or after hysterectomy. The studied group comprised 23 Cases with normal endometrium taken as a control group, 37 cases with endometrial hyperplasia while 10 cases were endometrial carcinoma.In the present study it was found that bcl-2 expression in the endometrium to vary with menstrual cycle. A higher bcl-sion was observed during the proliferative phase, and the secretory phase, bcl-2 expression declines.expre durinA significant increase in bc1-2 protein level in hyperplastic endo etrial group was observed as compared to the normal group. Also there were significant increases in bcl-2 protein level in the simple hyperplastic (SH) endometrium and non atypical complex hyperplastic (NCH) endometrium as compared to the normal secretory and normal proliferative endometrium. While, there was a non significant difference in bcl-2 protein in atypical complex hyperplastic (ACH) endometrium as compared to the normal secretory endometrium and the normal proliferative endometrium.It is possible that increased expression olbc1-2 may play an early part in the evolution of endometrial hyperplasia, allowing extended Survival of endometrial cells through inhibition of apoptotic death, in a manner analogous to the development offollicular lymphoma. Also the present results suggest that bc1-2 might be a useful diagnostic marker that distinguishes hyperplasia without atypia from non- atypical hyperplasia.A significant decrease in bcl-2 protein level was observed in cell lysate from endometrial carcinoma as compared to the normal proliferative, simple and non a typical hyperplastic endometrium. This may suggest that the role of bcl-2 in preventing cell death would appear to be frequently by passed in endometrium carcinoma by other factors impeding programmed cell death.The observed upregulation of bcl-2 in hyperplasticendometrium and down regulation in carcinoma may suggest that this protein plays an important role in the early stage of carcinogenesis of the tissues by preventing the transformed cell from undergoing apoptosis.However Bc1-2 is down regulated and its expression is decreased in atypical complex hyperplasia and endometrial carcinoma suggesting that bc1-2 apparently plays no role in progression of endometrial hyperplasia to carcinoma.Further studies are needed for

more clarification of the role of bc -2 in the genesis of endometrial hyperplasia and neoplasia.In particular, the posibility of using bcl-2 as an independentdiagnostic and prognostic marker has to be investigated.