Immunological approach to tonsillar malignancy correlation with biological parameters

Adel Ahmed Hafez

Mal ignant tonsi liar tumours account for about 3%of malignant tumours of the whole body (Barrs, 1979).Over 70% of tonsi liar mal ignancies are squamous eel lcarcinoma, of varying degree of histo-differentiation(batsakis, 1979). Over 15% of -tonsi liar mal ignanciesare mal ignant tonsi liar lymphoma (kabadia, 1985). Theso cal led lympho-epithel loma accounts for 5% of mal ignanttonsi liar tumours (Chen, 1975). This term was usedto define a tumour with two components, epithel ial andlymphoid elements present together, The origin of thetumour was obscured, whether it arosed from one or theother (Regaud, 1921 and Schmincke, 1921).Tonsl liar squamous ce r l carcinoma of undifferentiatednature and infiltrated with lymphocytes is difficultor some times impossible to distinguish frommal ignant lymphoma with the conventional methods evenwith ski lied pathologist (Batzakis, 1979 and Micheals, using the electon microscopy, the epithelialorigin of the tumour is confirmed (Svoboda, 1967). Wechoose the immunoperoxidase technique as it is simple,accurate and can be done in ordinary laboratories usingsimple light microscopy. Using the ~nticytokeratin(AE1, AE3) we can ident I f ied the presence of ep I the lia lcells, as the cytokeratins are intermediate size fi lamentof water insoiuble proteins, which can be producedby epithelial cell only. The AEI and AE3, constitute apool of antlcytokeratin which can be used as a commonantibodies for detection of all types of epithelialeel ls. To detect lymphocytes, T and B cell we used T200antibodies to detect the glycoproteins of highmolecuiar weight, which are surface antigens.In our study, 26 patients were chosen from the outpatients of Cancer Institute, Cairo University, BenhaUniversity Hospital, and Zagazig University Hospital,and who were proved to suffer from undifferentiatedtonsi liar squamous eel I carcinoma.Using immunoperoxidase technique with the two pri- mary antibodies, anticytokeratin (AEI and AE3) and T200(common leucocyte ant Igen), the first to Ident ifyepithelial cells, whi Ie the second to detect of lymphocytes.Using ABC method (Avidin Biotin conjugate method)on forma lin fixed paraff in embedded sect Ions, theproblem of background staining was solved.The biopsies were taken using local anaethesia,then Heamatoxyl in and Eosin was done then the immunolgoicstudy was done.from our studies 80% of quirry undifferentialsquamous eel i carcinoma, were proved to be undifferentiatedsquamous eel I carcinoma, whi Ie 20% were provedto be mal ignant lymphoma. Male were predominent, theratio of maies to females 5.5:1%.There was no patients below 30 years, the averageage was 60.5 years, with two peaks 30% between 50-60years and 40% between 60-70

years.The heavy smoking i.e. smoking two box ofcigarettes for 15 years or more, was the special habit for 77% of the patients mainly the male ones, whi Ie thealcohol drlning was 23% of the cases.The presenting symptoms in our study were lump inthe neck 73%, sore throat in 7.9%, foreign body sensationin 3.8%, dysphagia in 7.9%, haemoptysis in 3.8%and referred ear ache in 3.8%.The presenting signs in our study were exophytictonsl ilar mass 80% of cases and 20% in ulcerative type.The exophytic type was classified into Tl 4.3%, T220.1%, T3 55.3% and T4 20.3% whi ie ulcerative type wasdivided into Tl 40%, T2 60%.As for lymph node Involvement 80% of cases haveeli n ica IIY pos i t ive lymph nodes, ma in lyin j ugu I0-digastric lymph nodes. The lymph node involvement wasclaisified as Nl 28%, N2 30%, N3 42%.On applying anticytokeratin (AEI and AE3) on tonsiliar mal ignant tumours, the epithelial origin tumoursonly gives positive results i.e. undifferentiated tons!liar squamous eel I carcinoma. Also, the more undifferentiatedis the tumour the less positively staining results wi II be obtained, the reaction was focal andcytoplasmic as the cytokeratins are present in focalareas in the cytoplasm and not membranous.On applying the T200 (common leucocyte antigen),we get positive results, membranous in site due to thepresence of T200 antigens, glycoproteins of highmolecular weight present on the surface of the lymphocytes.There were no reiation between grading of lympnomaand the reaction of staining or the distributionof staining.The grading of the epithel ial tonsi liar malignanttumours can be correlated with the intensity of theBiologic reaction and its pattern. The more undifferentia ted the tumour, the less wi II be the i ntens ity ofthe Biologic reaction and more focal is the pattern ofreaction.The precise diagnosis of undifferentiated tonsi l-Iar squamous eel I carcinoma from mal ignant tonsi liarlymphoma helps the surgeons greatly in accurate treatmentwhether surgery and/or radiotherapy in cases of carcinoma and chemotherapy and radiotherapy in casesof lymphomas. Also, the exact diagnosis gives the surgeonsan idea about the expected prognosis and fiveyears survival rates.