antitumor immunity in urinary bladder carcinoma patients

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The leukocyte adherence inhibition (lAI) test since its earlyintroduction (and up till now) was applied to detect cell-mediatedimmunoreactivity related to various types of human diseases speciallycancer. Our previous studies of human urinary bladder squamous cellcarcinoma has been conducted in this issue and expanded to other tumortypes as well as shistosomases.Cancer pati ents were chosen at early stage of the di sease to getthe highest reactivity and usage of fetal calf serum (FCS) was avoidedbecause it causes nonspeci fic adherence inhi bi tf on of leukocytes.Following incubation of peripheral blood leukocytes (PBl) from eithercontrol subjects or carcinoma patients in serum-fr-ee medium, percentageadherent cells was estimated and considered as control level ofadherence.The toxicity of the tumor extracts (SqCC/UB, TreC/UB, AdnC/UBandSqCC/CX) and other extracts (NorE/UB/B2 and Shaem/SEA/83) was exa.•mined. The nontoxic concentrations (at which nonspec:ific reduction ofcell adherence was not observed) were determined and found to be of250 ug/ml for all extracts but 25 ug/ml for Shaem/SEll/83 extract.Although tumor extracts were prepared by one and the same method,different tumor-antigen preparations varied vastly in their ability togive specific adherence inhibition. All preparations consistently gavea high tumor-specific LA! (20% decreased adherence or more). Only theSqCC/UB2/82 fail ed to express such 1evel of adherence reducti on. USE!of this extract was avoided.Peri pheral blood 1eukocyte samples from SqCC/UBpati ents showedspeci fic LAl when reacted with SqCC/UBI/80, SqCC/L;el/82 andSqCC/U83/82, while no reactivity was observed when reacted withTCC/UBI/80, NorE/UBI/82, SqCC/CX1/82 or Shaem/SEA/83 extracts.Peripheral blood leukocytes of other urinary bladder carcinomapatients, cervical carcinoma or even s.haematobiWII patients showed thesame way of specificity of LAl in presence of their !oensitizing antigens.Cross reactions between various types of uriOiiry bladder carcinomaswas found to be combletely absent, indicating tissue type specificity.Such absence of cross-reactivity was al so demonstratedlbetween urinary bladder and cervical squamous cell carcinomas. Thi sindicated organ tissue type specificity. Shaem was also none crossreacting with SqCC/U8 which reveal ed that S. haema~obiWII (as COfllTlOIlinfection in urinary bladder carcinoma) does not tnterf’ere ••i.th cel lularimmune reactions of SqCCpatients.The SqCC/UB1/82 reactive antigen was purified by gel filtrationchromatography. The peack Creta t ned all the anti genic acti vi ty asdetected by the LAl technique at the same 250

ug/ml concentration asthe crude extract. Molecular weight of this active fraction was es ttmatedand found to be of 16,227 daltons.Two versions of the LAl assay (haemocytometer and microplate)were at the same level of sensitivity in detecttns C~ll in urinarybladder carcinoma patients. The tube modification of the LAl testfailed to show reliable results when tests were performed using PBMCof the same patients.The difficulties in counting, visually, the adherent cells leadto the introduction of colorimetric modifications of the micro-LAIversion. Establishment of what is refered to as the TPC/microcolorimetericLAI-assay was performed. Thi s assay showed rel iable results indetecting specific adherence reduction of leukocytes.The mechanisms involved in the LAI reaction were detected by theestablished TPC/microcolorimetric modification of LAI assay. Nomediator of the lymphokin family could be detected. Mechanism was confirmed to be dependent on T cell s, B cell sand monocytes di recti nteracti on with the sens iti zi ng anti gen, and on monocyte dependenceon B lymphocyte arming. T lymphocytes, regardless that putativemediators, are acti ve whempresent ina pure popul ati 011 ••