


Distinguishing lymphoma and small cell anaplastic carcinoma of the thyroid by immunocytocchemistry

I read with interest the report by Burt et al regarding the problem of differential diagnosis between lymphoma and small cell anaplastic carcinoma of the thyroid. A similar study has been performed in our department in Leicester on a smaller number of cases (19). In addition to thyroglobulin and epithelial membrane antigen antisera, our study also included a cytokeratin antibody (CAM 5.2). It was found that this antibody was more sensitive for detecting epithelial malignancies than epithelial membrane antigen. A combination of common leucocyte antigen and CAM 5.2 resolved the differential diagnosis in all but two of the cases. The use of this or a related cytokeratin antibody, together with common leucocyte antigen is thus suggested for this diagnostic problem. Epithelial membrane antigen, apart from reduced sensitivity compared with cytokeratin, suffers from the additional disadvantage of being reactive in a proportion of lymphomas.2

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References


T lymphocyte numbers and serum E rosette inhibitory substance

It is well established that T lymphocyte numbers are diminished in certain disease conditions. These include protein calorie malnutrition,12 plasmomad falciparum infection,34 measles infections,13 and systemic lupus erythematosus.7 Others are HBs Ag positive chronic hepatitis,8 rheumatoid arthritis,9 and cancer.10 Sera from most of these patients inhibit both in vitro phytohaemagglutinin transformation of lymphocytes,511 and E rosette formation by normal human lymphocytes.12-17

There is circumstantial evidence to suggest that the presence of E rosette inhibitory substance (probably an immune complex) could be partly responsible for the diminished number of E rosettes that are recorded in these patients. Treatment with levamisole considerably increases the number of E rosette forming T lymphocytes in vivo and in vitro in several disease conditions, in which patients commonly possess circulating immune complexes and low E rosetting lymphocytes.18-20 We also observed recently that, in common with children who had protein calorie malnutrition, children with malaria or measles infections had increased titres of circulating immune complexes, serum E rosette inhibitory substance(s), and diminished numbers of circulating E rosettes.16

It is therefore necessary for workers carrying out studies of lymphocyte subpopulations to be cautious in interpreting findings of diminished E rosettes. The percentage of E rosettes observed in such cases may not represent the total circulating E rosette numbers present. From our experience a test for the presence of E rosette inhibitory substance(s) in such patients is useful, as there may be some circulating T lymphocytes that are not capable of forming E rosettes in vitro, probably as a result of the previous binding of their surface receptors to inhibitory substances in vivo.14

References


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