Letters to the Editor

Aberrant expression of HLA-DR antigen in diffuse sclerosing variant of papillary carcinoma of thyroid

Diffuse sclerosing papillary carcinoma is a rare type of thyroid tumour, characterised by a diffuse disease in one or both thyroid lobes, with dense sclerosis, extensive lymphocytic infiltration and abundant psammoma bodies intermixed with islands of papillary carcinoma. This type of tumour comprises 3% of papillary carcinomas and is associated with a more aggressive clinical course. The pathogenic role of the lymphocytic infiltration and diffuse disease in this particular type of tumour remains unknown.

We recently studied a case of diffuse sclerosing papillary carcinoma in a 26 year old woman. The tumour exhibited diffuse spread throughout the left thyroid lobe. It showed dense sclerosis, lymphocytic infiltration, and abundant psammoma bodies intermixed with elements of papillary carcinoma with focal squamous metaplasia. To investigate the nature of the lymphocytic infiltration in this tumour we performed an immunohistochemical study with a large battery of antibodies. The lymphoid component was polymorphic and was composed of both B and T cells. The most striking immunohistochemical finding was the strong positivity of the tumour cells for HLA-DR antibodies. Normal follicular epithelial cells were negative for this antibody.

Little is known about the pathogenic importance of the lymphocytic infiltrate in diffuse sclerosing papillary carcinoma. It has been shown that the tumours contain numerous, S-100 positive, Langerhans' interdigitating reticulum cells scattered throughout the tumour islands and lymphoid infiltrate, suggesting an immunological reaction mediated by antigen-presenting cells. In a recent study Kamma, Fuji and Oyata studied the importance of lymphocytic infiltration in nine juvenile thyroid carcinomas. They found a clear correlation between HLA-DR expression by the tumour cells and the degree of lymphocytic infiltration. They suggested that lymphocytic infiltration is an immunological reaction induced by antigens from the carcinoma itself and that the reaction may progress according to tumour development. None of the tumours studied, however, was a diffuse sclerosing papillary carcinoma. The immunohistochemical findings in our case agree with their results and suggest that aberrant expression of class II histocompatibility HLA-DR antigens in tumour cells may have an important role in the immunological reaction in this type of tumour as it does in autoimmune thyroiditis.

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References
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Cold Ziehl-Neelsen stain for Campylobacter in gastric biopsy specimens

Campylobacter can be identified in sections stained with haematoxylin and eosin but, as they stain relatively weakly and may be obscured by surface mucus, other stains are often used to visualise them. Among the special stains used are silver methods (Warthin-Starry and Warthin-Faulkner), Romanowsky stains, the Gram Stain, and recently, the Gimenez stain.

The silver methods are complicated and time consuming and the Gram stain is unsatisfactory, leaving Giemsa or Gimenez as the best stains for routine use. We present an alternative method, based on cold carboll fuchsin as in the Gimenez technique but requiring less preparation.

Staining takes only about five minutes to complete, with the minimum of reagents, and the method has proved useful in a busy laboratory.

1 Sections to water via xylene and alcohol.
2 Stain in carboll fuchsin at room temperature for one minute.

Rectal carriage of Chlamydia trachomatis in women

The first reports of isolation of Chlamydia trachomatis from rectal mucosa in women indicated high risk groups showed the prevalence of rectal chlamydial infection to be 11-8%. Since then other investigators have found rates of 21% and 5.2%, the difference being ascribed to the widely differing levels of admitted anal intercourse (60-9% and 4-1%, respectively) in the two groups. In a review of rectal infection in women with gonorrhoea the prevalence ranged from 26 to 63% [mean 44%]. As there was no history of anal intercourse in most cases autoinoculation with cervico-vaginal material was assumed.

We studied rectal carriage of Chlamydia trachomatis in 84 women attending consecutively at a sexually transmitted disease clinic.
of inclusions found in tissue culture. This result, however, has to be judged against the finding of 15% false positive smears from women who were culture negative in both cervix and rectum; and this, despite the rigorous application of criteria for numbers, size, shape, colour and intensity of fluorescence of elementary bodies.

The problem of specificity of the IDEIA Mark 2 when testing rectal/faecal specimens is well recognised,\(^5\) so that finding 55% false positive results among rectal specimens from women who were culture negative in both cervix and rectum was not unexpected. Although this figure improved when the same specimens were tested in the modified IDEIA Mark 3, it was still too high at 20% to allow this test to be used in diagnosis of rectal chlamydial infection.

Under certain conditions the presence of \(C.\) trachomatis in children indicates that sexual activity has occurred. If, in such low risk groups, cultural methods may result in underdiagnosis and antigen detection methods show high false positive rates,\(^6\) the implications where sexual abuse is suspected may be serious.

**References**


Cytomegalovirus and autoimmune liver disease

There are three major liver diseases for which no infectious or toxic causal agent has been identified, but in which the hepatic parenchyma is damaged: primary biliary cirrhosis (PBC); autoimmune (lupoid) hepatitis; and primary sclerosing cholangitis (PSC). Autoantibodies are common in PBC and lupoid hepatitis, suggesting an autoimmune process. This has been considered for PSC as well, but evidence is scanty. Among other possibilities, it has been suggested that occult viral infection might have a role in initiating these three diseases. Cytomegalovirus (CMV), which is common in the general population, is a potential candidate, having already been implicated in a paucity of intrahepatic bile ducts in neonates and after orthotopic liver transplantation.\(^12\) CMV also causes acute hepatitis in immunocompromised patients and, occasionally, in immunocompetent hosts,\(^39\) and like PBC, can have granulomatous features.\(^4\) Moreover, CMV probably causes disease not only by lysing infected cells, but also by interacting with and changing the host immune system.\(^36\) Ways in which it might do this and thereby induce an autoimmune process include perturbation of cell membranes of non-productively infected cells, and expression of viral proteins by such cells, leading to a T cell response or to stimulation of lympho- interferon release.\(^4\) In such circumstances, a productive viral replication would not necessarily occur and the classic cellular enlargement and inclusion bodies of productive infection would not be recognised. Yet, for CMV to be considered pathogenic, it must be identified at the affected site. We therefore used both immunoperoxidase and in situ hybridisation techniques to look for early viral antigens (which may be produced without complete viral replication) and viral nucleic acid, respectively.

Biopsy specimens from eight patients with PSC, seven with autoimmune hepatitis, and 15 with PBC were examined. Two of the patients with PBC had two biopsy specimens each. Thus 32 formalin fixed, paraffin wax-embedded biopsy specimens were studied. Sections were examined using commercially available primary antibodies to early and late viral antigens (Dako Inc.) and DNA probes (Enzo Inc.). Biopsy specimens from patients with CMV oesophagitis were used as positive controls. These specimens had been processed in the same way as those from our study cases and had typical cytomegalovirus cells present in all levels as well as infected cells identifiable only by the special staining techniques. Appropriate method controls.