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PROSTATIC ACID PHOSPHATASE IN CLOACOGENIC CARCINOMA

Cloacogenic carcinoma is a malignant neoplasm probably originating from the anorectal transitional zone considered as a vestige of the cloacal membrane (1–4).

This tumour may cause diagnostic concerns, since it shares some histopathological features with other types of neoplasms such as basal cell carcinoma, carcinoids and small cell neuroendocrine carcinoma (5). In this preliminary report we present two cases of cloacogenic carcinoma with immunohistochemical positivity for prostatic acid phosphatase (PAP), an observation which could be diagnostically useful.

Patient No. 1 was a 29-year-old homosexual male with a two-month history of intense perianal pain. Exploration showed a 3 × 3 cm ulcerated tumour in the anorectal zone which infiltrated the deep tissues. He underwent abdominal perineal resection after diagnosis by biopsy. Histologically the tumour was composed of small strands and nests of epithelial cells, growing invasively in a finger-like fashion. In some areas, there was palisading at the periphery of the nests. The cells were of moderate to small size with scant eosinophilic cytoplasm and oval nuclei, some of which were large and vesicular in appearance. Scattered mitoses were found.

Patient No. 2 was a 68-year-old female with several months' history of perianal pain. Exploration showed a 4 × 2 cm infiltration tumour at the level of the anorectal junction. Abdominal perineal resection was performed in this case too. The histologic pattern was similar to patient No. 1, however with larger nests of cells without palisading. Central necrosis was prominent in most of the epithelial nests (Fig. 1). The cells were also larger and had very vesicular and atypical nuclei. Prominent nucleoli and mitoses were frequent, as well as squamous differentiation. One lymph node was involved.

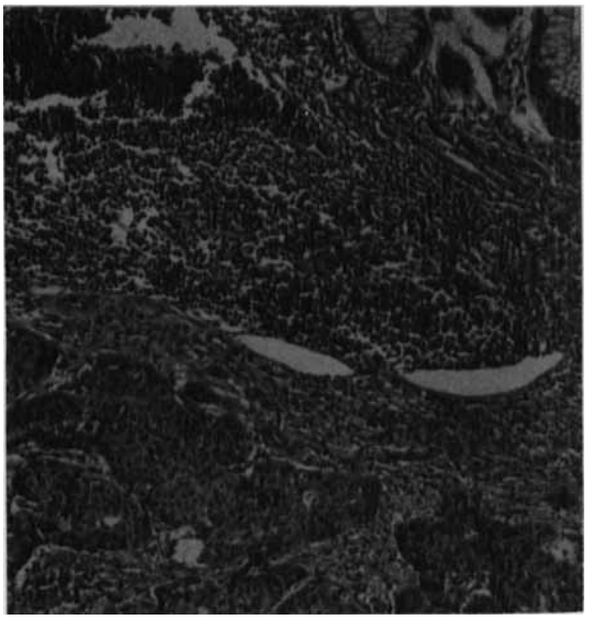

Fig. 1. Cloacogenic carcinoma (case 2). Nests of tumour cells with central necrosis near rectal mucosa. H-E × 100.

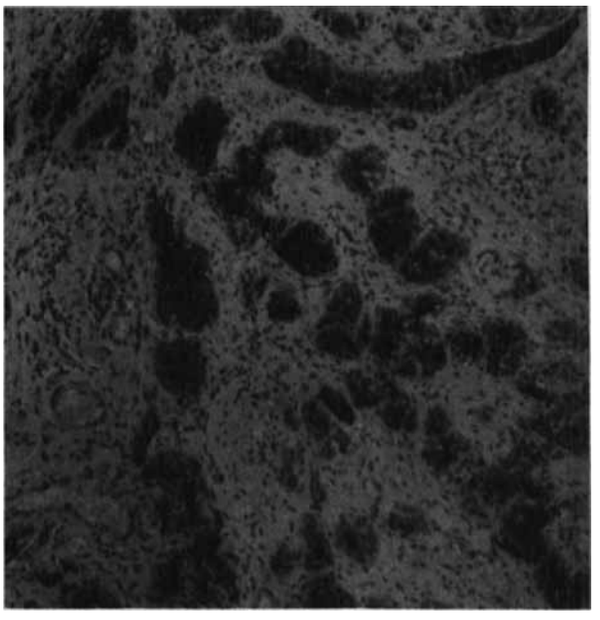

Fig. 2. Immunohistochemical positivity for PAP in tumour cells. Immunoperoxidase-PAP × 100.

Immunohistochemical staining for neuronspecific enolase (NSE) (Dakopatts, 1/50), prostate specific antigen (PSA) (Dakopatts, 1/400) and prostatic acid phosphatase (PAP) (Dakopatts, 1/100) was in both cases positive for the PAP only. The staining was cytoplasmic and more intense at the periphery (Fig. 2). Proper negative controls were used as well as special negative controls for the PAP: one squamous carcinoma and one basal cell carcinoma of the skin. Both of them proved negative. Grimelius and Masson-Fontana stains were negative in both cases.

The histologic appearance of the tumour was in case 1 similar to the 'basaloid' type and in case 2 to the 'pleomorphic' type of anal carcinoma (6). Although PAP has been found in other tumours, apart from prostatic cancer as carcinoids and pancreatic carcinomas (7), this is the first time, to our knowledge, that PAP has been described in cloacogenic carcinoma. Concerning the reason for the PAP positivity one can only speculate.

The tumours may represent carcinoids or small cell neuroendocrine carcinomas expressing PAP, but the negative NSE and Grimelius and Masson-Fontana stainings make this very unlikely.

Immunohistochemical cross-reactivity for the polyclonal antibody with other antigens cannot be excluded: in case 1 and the special controls from the skin we found clear positivity for PAP in eccrine gland ducts near the tumour, but no relationship was found between these structures and the neoplasm. Another, and perhaps the most likely, explanation may be that cloacogenic carcinoma and the prostate have a common origin in the cloaca and therefore both express PAP. This could support Grinvalsky's and Helwig's hypothesis about the histogenesis of cloacogenic carcinoma (1).

Obviously, more cases are needed in order to evaluate how consistently cloacogenic carcinomas are PAP positive. However, if further investigations show that PAP positivity is a frequent feature of these tumours, this antigen could be diagnostically useful.

Key words: Anal carcinoma, cloacogenic, prostatic acid phosphatase.

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