

Brief Note

Mucinous Adenocarcinoma of the Prostate

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Key words : prostate — carcinoma — mucinous carcinoma

Mucinous or colloid carcinoma is a variant of adenocarcinoma, in which aggregates of tumor cells lie in pools of mucin. Prostatic carcinomas of this type are rarely found, and according to Odom *et al.*,¹⁾ only 30 some cases have been reported since Boyd²⁾ described it for the first time in 1881. The differentiation of adenocarcinomas of this type, primary in the prostate, from rectal mucinous adenocarcinomas directly infiltrating into the prostate is of importance because their method of treatment and their prognosis are different each other.

Herein described is our experience of mucinous adenocarcinoma of the prostate in a 80-year-old man with dysuria of about a month's duration. A needle biopsy was performed into the stony hard lesion in the left lobe of the prostate. Histology showed typical features of mucinous adenocarcinoma; i.e., tubular and cribriform structures of adenocarcinoma floating in the pool of mucinous material (Fig. 1), in addition to the areas of ordinary type of prostatic adenocarcinoma (Fig. 2). Mucin was positively stained with PAS, mucicarmine, Alcian blue (pH 2.5). All the cells in both areas of this tumor

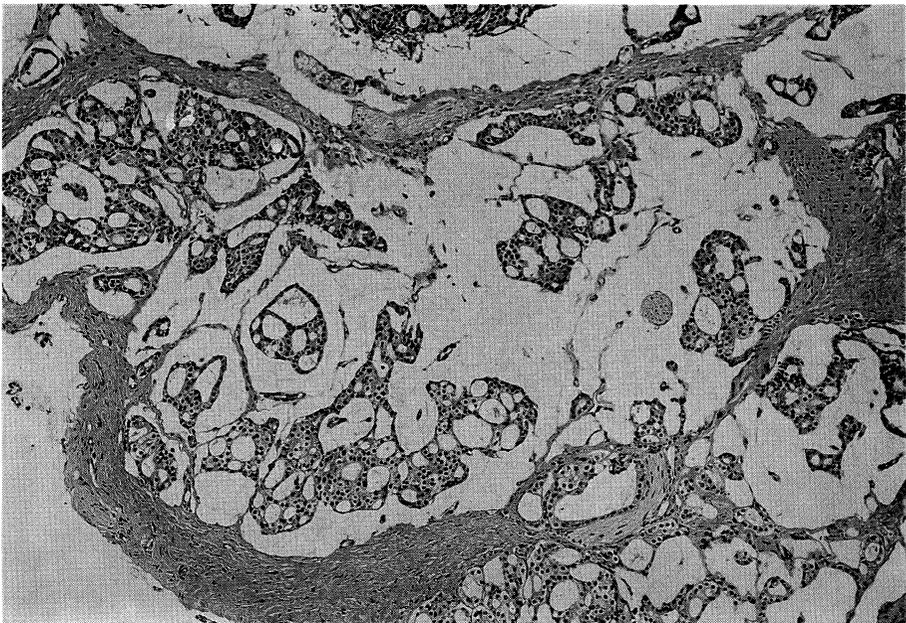


Fig. 1. Mucinous carcinoma of the prostate. (H-E, $\times 75$)

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were immunohistochemically positive for prostate specific antigen (PSA) (Fig. 3), but no evidence of carcinoembryonic antigen (CEA) or epithelial membrane antigen (EMA) was seen. These features are consistent with adenocarcinoma

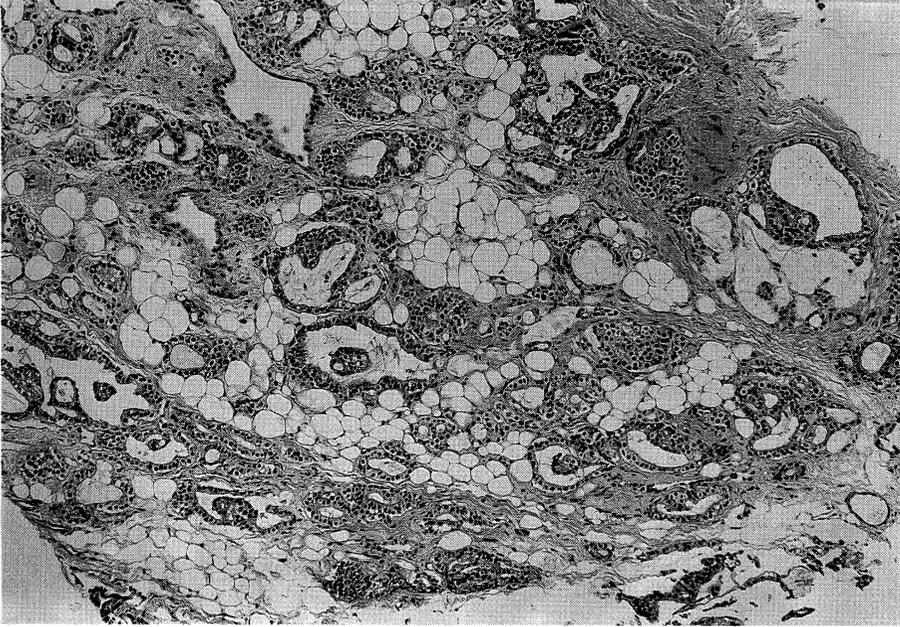


Fig. 2. Co-existing acinotubular portion of prostatic adenocarcinoma, which infiltrates in the fibroadipose tissue. (H-E, $\times 75$)

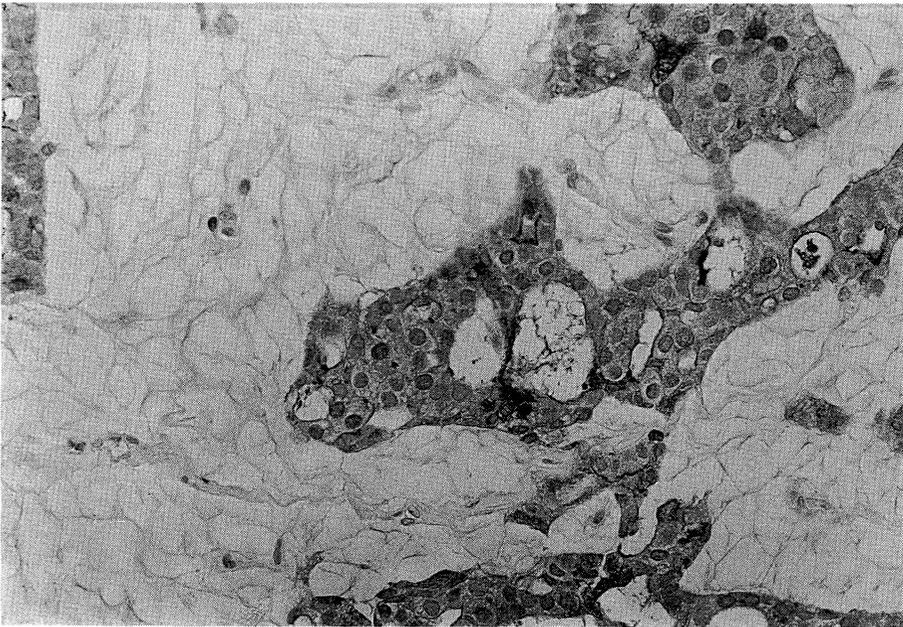


Fig. 3. Carcinoma cells in the mucin pool are positive for PSA. (Immunoperoxidase, $\times 200$)

of prostate primary.³⁾ Occasional argyrophilic cells were scattered within the portion of ordinary adenocarcinoma but none was noted in the mucinous portion. There was no evidence of metastasis clinically but the serum acid phosphatase level was 130 KAU, alkaline phosphatase 146 IU/l, and serum CEA level 15.2 ng/ml.

The histology of our case indicates that mucinous carcinoma is just a variant of the classic acinotubular carcinoma, since both types co-existed in the same tumor tissue. Generally, however, this type of prostatic carcinomas is regarded as a carcinoma differing in biological behavior from the others. Mucinous adenocarcinoma of the prostate is said to be a slowly growing, relatively non-invasive tumor.^{4,5)} The average age of patients is 70 years,^{6,7)} and 50 per cent of patients are free of metastatic disease at presentation. In the remaining patients, however, metastasis was noted in pelvic lymph nodes, bone, brain, liver, and lungs.⁸⁻¹¹⁾ In the majority of patients, serum acid phosphatase levels are normal^{4,8)} but of course elevated levels have been reported.^{4,6,9)} The treatment of choice in the absence of metastasis seems to be surgical resection since hormonal manipulation, radiation therapy and chemotherapy were unsuccessful in deterring tumor progression.^{10,12)} Because mucinous carcinoma of the prostate is rare, this case should be carefully followed up to obtain some insights on its biology.

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