A CASE OF CARCINOMA OF THE RECTUM ASSOCIATED WITH FISTULAE IN ANO

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Kraske (1) in 1897 stated that there is no satisfactory evidence that cancer arises from a hemorrhoidal tag or a fistula. Ewing (2) quoted Kraske and is apparently of the same opinion. Opposing this view are a number of reports in the recent literature which conclude or imply that fistulae and other rectal abnormalities cause the development of cancer. The literature on this subject shows little in the way of histological detail which might establish a causal relationship between the rectal abnormalities and the cancers. The case of Fitchet (3) was a squamous-cell carcinoma, demonstrated by histological study to have originated from the lining epithelium of a fistulous tract. A probable case has been reported by Rosser (4), in which curettage of a fistulous tract disclosed squamous epitheliomatous tissue. The reports of cases by Moon (5), Lockhart-Mummery (6), and of other cases by Rosser (7) give no satisfactory histological evidence. Consequently, the only statement which can safely be made on the basis of these reports is that there may be an association of cancer with fistulae.

In a series of 779 cases of rectal cancer, Mandl (8) was able to find only 3 cases in which a fistula preceded the cancer. Jacobs (9) found 5 cases of ischiorectal abscess and fistulae associated with cancer in 91 cases of cancer of the rectum collected over a period of ten years at Montefiore Hospital. The reports of Rosser (7) and others would indicate a greater frequency of such an association. The indecisive aspect of these studies stimulated a detailed histological study of a case of multiple fistulae associated with a mucinous carcinoma which came to autopsy at the Cleveland City Hospital.

CASE REPORT

G. J., a sixty-nine-year-old white man, was admitted to the Cleveland City Hospital because of an ulcerating mass in the perineal region. The history indicates that fifteen years previously the patient had a painful, red swelling of the perineum which resulted three months later in the formation of two fistulae. These fistulae discharged thick pus, apparently continuously. Eleven years later the patient was subjected to surgical treatment in another city, with some improvement, but the discharge continued. There was a history of constipation at intervals and possible loss of weight. No other significant history was elicited.
The perineum presented a gelatinous tumor mass of uneven contour, showing numerous sinuses and depressions filled with pus. Portions of this tissue, removed surgically, had the histologic character of mucinous adenocarcinoma. The patient died six weeks after admission.

At autopsy, seventeen hours after death, there was an irregular, well defined area of ulceration with a moist, greenish-gray, friable base covering the entire perineum and posterior aspect of the scrotum, and extending laterally to both buttocks. This ulceration extended to within a centimeter of the anal margin. The skin surrounding the anus was normal. Adherent to the anterior wall of the rectum and just above its termination was a moderately firm, unencapsulated, poorly delineated and finely loculated, pale gray, glistening, gelatinous tumor, measuring 6 x 4 x 3 cm. in size. The tumor was outside of the rectal wall and infiltrated the tissues between the rectum and the bladder and prostate. The rectal mucous membrane was normal in appearance except for the internal openings of three fistulous tracts at the ano-rectal junction in the anterior wall of the rectum. These tracts were from 2 to 4 mm. in diameter and could be probed to a depth of about 3 cm. Two of these terminated in the tumor mass, within 1.5 cm. of the anus; the third ended in the left ischiorectal space. The lining of the tracts had a coarsely granular, pinkish-gray surface. In one of them a transition to a smoother, pale gray surface was observed. In addition to the mucinous carcinoma about the rectum there was generalized arteriosclerosis with moderate hypertrophy of the heart. The apical portion of the right lung showed encapsulated and calcified tuberculosis, and there was pronounced pulmonary congestion with edema. There was no other gross evidence of tuberculosis in the body. No tumor metastases were found.

Microscopic Findings: Sections of the rectum near the fistulae show areas where the normal epithelium is replaced by the squamous type. The muscularis mucosae and the submucosa in these areas are represented by dense scar tissue. There is also a moderate amount of perivascular fibrosis in the muscular layers. There is no suggestion of neoplasm in the rectal mucous membrane near the fistulae or at other levels examined.

Sections of all fistulous tracts show a very fragmentary, interrupted, squamous or transitional lining, alternating with granulation tissue profusely infiltrated with inflammatory cells. The inflammatory cells include polymorphonuclear leukocytes, most numerous near the lumen, as well as all types of mononucleated cells, including plasma cells. Occasional glandular structures resembling crypts of Lieberkühn are noted in the granulation tissue, but without clearly demonstrable connection with the lining epithelium of the fistulae. In the deeper portions of the sections the fibrous tissue is quite dense and is infiltrated by lymphocytes. In this tissue, at an appreciable distance from the fistulous tract, are found the large, irregular acini characteristic of mucinous adenocarcinoma. In one of the tracts the carcinomatous acini are in close relation to the lumen and appear in the granulation tissue lining. These acini are small and isolated. They represent the fringe of the tumor situated in the deeper tissues. Sections of pararectal tissue, including urethral mucous membrane, as well as sections of prostate and seminal vesicles, show no involvement of genito-urinary structures. However, the tumor is found in close proximity to the paraurethral glands near the prostate. There are also foci of necrosis associated with giant cells of Langhans type, endothelial cells, and lymphocytes, suggesting a chronic granulomatous lesion. No acid-fast organisms are demonstrable in these sections. Sections of other organs show no tumor involvement.
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Discussion

Since the rectal mucous membrane shows no involvement by neoplasm, grossly or microscopically, it is reasonable to assume that the carcinoma did not arise from this tissue. While an occasional neoplastic acinus is found in the granulation tissue of the fistulous tracts, these glands are small and are in isolated positions, suggesting the possibility that they are extensions from the main tumor mass situated in the pararectal tissues. Evidence is lacking that the occasional carcinomatous acini seen in the granulation tissue lining the fistulous tracts are derived from or related to the non-neoplastic glands found in the fistulae. In view of these conclusions an etiologic relationship between the fistulous tracts and the cancer is not established. The exact origin of the carcinoma is not apparent, but it has all the characters of tumors of this sort which arise from the rectum.

Summary

1. A case of mucinous carcinoma of the rectum associated with fistulae in ano is reported.
2. Careful examination provided no grounds for an assumption that the carcinoma originated in the fistulae.

Bibliography