Peritoneal Keratin Granuloma Masquerading as Disseminated Carcinoma

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Key Words

Laminated keratin · Peritoneal keratin granuloma · Peritonitis

Abstract

Peritoneal keratin granuloma is a rare lesion included under granulomatous lesions of the peritoneum. It can be of infectious and non-infectious etiology. The lesion presents as a large intra-abdominal necrotic mass often misinterpreted clinically as a disseminated carcinoma. We report a case of peritoneal keratin granuloma in a 50-year-old male following peritonitis. Histomorphology revealed laminated keratin deposits with giant cell reaction. Follow-up data of this granuloma suggests that it has no prognostic significance.

Introduction

Peritoneal keratin granuloma is included among reactive tumor-like lesions of the peritoneum [1]. It has got an infectious or non-infectious etiology [1]. It is often clinically confused with a malignancy. In male patients the source of keratin can range from squamous metaplasia to multilocular peritoneal inclusion cysts (MPIC), which are inflammatory cysts of the peritoneum [2, 3]. This lesion is purely benign, as no recurrence has been observed so far during the follow-up interval [2].

Case Report

A 50-year-old male presented with a large intra-abdominal mass of 2 years. The operation theatre note suggested that there was a large necrotic friable mass measuring 20 cm × 15 cm × 10 cm probably arising from the peritoneum. The mass was adherent to the stomach, liver and transverse colon. The patient gave a previous history of peritonitis prior to the development of the abdominal mass. The case was followed up for 4 years and there was no evidence of recurrences. Grossly multiple small bits of

friable, necrotic tissue were received, together measuring 15 cm × 10 cm × 10 cm ([fig. 1](#)). Multiple sections studied revealed laminated keratin deposits with giant cell reaction ([fig. 2](#)). There were small areas of fibrosis.

Discussion

This rare tumor-like lesion has an infectious or non-infectious etiology [3]. It has also been classified as primary or secondary [1, 3]. The source of keratin in primary (infectious) peritoneal granuloma can be from MPIC [3]. The non-infectious type can be secondary to neoplasms of female genital tract-like endometrioid and endometrial carcinoma with squamous differentiation, squamous cell carcinoma of the cervix and rarely polypoid adenomyomas of the uterus [4]. In such cases the keratin granuloma should be thoroughly sampled by a gynecologist and carefully examined microscopically by a pathologist to exclude the presence of viable tumor cells. Since in our case the patient was male, an infectious etiology was thought of. Histology of the granuloma constitutes laminated keratin deposits, in some case accompanied by necrotic squamous cells surrounded by foreign body giant cells and fibrous tissue [3]. The differential diagnosis includes peritoneal granulomas in response to keratin derived from other sources, including amniotic fluid and ovarian dermoid cysts [3]. Although follow-up data have shown that these granulomas have no effect on prognosis, the prognostic significance of these lesions has not been established with complete certainty because of the short follow-up interval in some cases, and because some patients have received postoperative radiation therapy, chemotherapy or both [3].

Fig. 1. Gross photograph of the specimen showing multiple small bits of friable necrotic tissue.

Fig. 2. Pictomicrograph showing laminated keratin deposits with giant cell reaction ($\times 400$, H&E).

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