



## Metastatic Squamous Cell Carcinoma of The Cervix Presenting As A Splenic Cyst

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### Abstract

Squamous cell carcinoma metastatic to the spleen is a rare occurrence and has been reported mostly in autopsy series. Only two cases of carcinoma cervix with solitary metastasis to the spleen have been reported in living patients. Among these, the tumour was confined to the spleen in only one case, where as in the other it had extended to involve the pancreas and the left kidney and adrenal. We present a case of a 50 year old patient with carcinoma cervix, treated with radiotherapy in 1997. Four years after completion of primary treatment, she presented with a painful mass in the left hypochondrium. Exploratory laparotomy revealed a splenic cyst which on pathological examination was diagnosed as metastatic squamous cell carcinoma. The patient received chemotherapy and was alive four years later, at the time of writing of this report.

### Key Words

Carcinoma Cervix, Spleen, Metastasis

### Introduction

Spleen is a rare site for blood borne metastasis. In routine autopsy material 0.3% to 0.9% of the patients with carcinoma are found to have splenic involvement (1). It has been observed that splenic metastasis occurs only in patients with widely disseminated tumours and, therefore, it usually occurs late in the course of the disease. Carcinomas of the lung and breast comprise 30% to 67% of all splenic metastasis (2). Other common tumours metastasizing to the spleen are melanomas of the skin as well as carcinomas of the pancreas, large intestine, stomach and retro-peritoneal tumours (1-3). Moreover, splenomegaly, as the clinical manifestation of metastatic spread is extremely rare (4).

On the other hand, the most commonly reported sites of distant metastasis for carcinoma cervix include the lungs, bones, mediastinal and supraclavicular lymph nodes

(pelvic and para-aortic nodes comprise the regional lymph nodes) and the liver (5). Unusual metastases have been reported to the skin and soft tissues, gall bladder and pericardium (5). Recently, umbilical metastasis also has been reported (6). Squamous cell carcinoma of the cervix metastatic to the spleen is a rare occurrence and spleen as the solitary site of metastasis, clinically evident as splenomegaly, is rarer still (5, 7,8). We report a case of a squamous cell carcinoma of the cervix metastatic to the spleen presenting as a splenic cyst.

### Case Report

A 50 year old Indian, Sikh female presented to the Department of Surgery, Government Medical College Jammu, J&K (India), in September 2001 with a 6 month history of pain and heaviness in the left hypochondrium. The symptoms had intensified in the preceding month and there was accompanying fever which was moderate

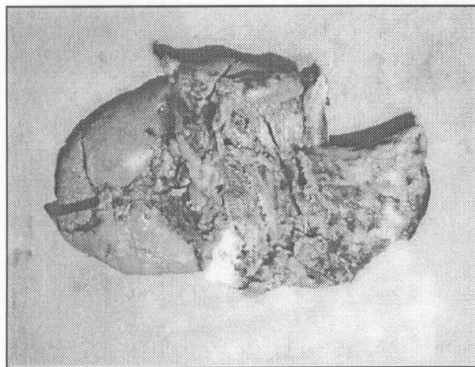
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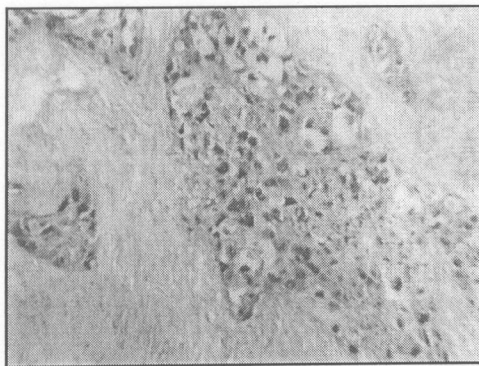
and intermittent. On physical examination, she had a palpable mass in the left hypochondrium extending upto 5 cm below the costal margin and moving with respiration.

Ultrasonography revealed a 5 cm by 4 cm cystic mass in the spleen and in view of the toxic symptoms, the diagnosis of a splenic abscess was given. An exploratory laparotomy was performed in October 2001 and the spleen was found to be partially replaced by a cystic mass measuring 7 cm by 5 cm. No adhesions with any neighbouring structure were found. The spleen was removed and was received in the Department of Pathology, Government Medical College Jammu, for histopathological examination. Grossly, an already cut open cystic cavity was seen in the spleen, measuring 7.5 cm by 5.5 cm by 1 cm and having shaggy necrotic walls with areas of haemorrhage (Fig. 1). Microscopic examination of the sections taken from the cyst wall showed metastatic deposits of a keratinizing squamous cell carcinoma (Fig. 2).

*Fig. 1 Gross Photograph of Splenectomy Specimen, One Half Showing Intact Spleen & Other Half Showing a Cut Open Cyst*



*Fig. 2 Splenic Cyst Showing Deposits of Malignant Squamous Epithelial Cell in Between The Splenic Trabeculae (X 400)*



Further inquiries from the patient and reappraisal of the old records revealed that the patient was an old case of squamous cell carcinoma of the cervix. The condition was diagnosed four years ago in 1997 when a pap smear and a cervical biopsy were taken following complaints of irregular bleeding and foul smelling discharge per vaginum. Investigations like chest X-Ray, ultrasonography of the abdomen, intravenous pyelography and cystoscopy were carried out and a FIGO stage IIb lesion was confirmed. The patient received radiotherapy in the form of external beam radiation in the Department of Radiotherapy, Government Medical College Jammu. Following treatment, the patient remained disease-free for three and a half years till March 2001, when she developed a dull pain in the left hypochondrium.

### Discussion

Metastases to the spleen are rare compared with incidence of metastases in other parenchymatous organs (3). Different authors have tried to explain this feature with widely varying theories. Woglom, in 1929, hypothesised the presence of a humoral substance 'the splenic factor' in the spleen which destroys all tumour cells reaching the organ (3, 4). Kettle postulated that the contractions in the spleen force the blood from the sinusoids into the splenic veins, keeping tumour cells in constant motion, thus preventing tumour implantation (4). Sapington stated that the sharp angle made by the splenic artery at its origin from the celiac axis made it difficult for tumour emboli to enter the vessel.

Marymont and Stanley described the patterns of metastatic cancer in spleen and correlated them with its structure (3). They defined metastasis as a non-contiguous secondary nodule of tumour cells. Direct extension of neoplasm from a neighbouring focus or involvement of splenic capsule as a part of peritoneal seeding were not considered true metastases. The authors reached the conclusion that majority of the secondary carcinomas in spleen are the result of hematogeneous dissemination. They divided the cases into seven groups on the basis of appearance and location of the metastases. Groups I to V fell into the category of microscopic metastases and groups VI and VII belonged to the category of grossly visible secondaries. In the case that we present, the

secondary deposits in the spleen were grossly visible as a cyst with necrotic walls. Badib *et al* in 1968 observed splenic metastases from cervical cancer in 4.7% of the cases at autopsy (9). Carlson *et al* reported that 15.3% of the 2220 patients of carcinoma cervix studied by them had distant metastases but spleen metastases were found only occasionally and that too as a part of widespread abdominal disease with lymph node involvement (10).

Klein *et al*, reported a case of carcinoma cervix with metastasis to spleen presenting as a painful splenomegaly four years after initial diagnosis and radiotherapy. The patient had a big mass in spleen which was adherent to the pancreas, the left kidney and the left adrenal. She was subsequently treated with surgery and intraperitoneal chemotherapy and was alive two years after receiving treatment. On the basis of this case report the authors advocated the use of aggressive treatment with splenectomy and combined modality approach to prevent dissemination when solitary spleen metastasis was suspected in a clinical setting (4).

Carvalho *et al* (5) described another case of previously treated, stage II b (FIGO) squamous cell carcinoma of cervix diagnosed clinically four years later with splenic metastasis, the spleen being the only documented site of distant spread. This patient was also treated with splenectomy and chemotherapy (5). Pang (7) & Goktolga (8) also reported a case of isolated solitary metastasis to and recurrence in the parenchyma of the spleen by squamous cell carcinoma of the uterine cervix. The case that we present is an addition to this highly select club of squamous cell carcinomas of cervix with solitary

metastasis in spleen presenting clinically as splenomegaly. Very few such cases have been reported in world literature and this is probably the first of its kind being reported in the Indian literature.

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