

MALIGNANT CHANGE IN DERMOID CYST

(Report of 2 cases)

by

A. V. NARAYANA RAO,* M.D.

and

R. J. SRINIVASULU,** M.D.

As malignant change in a dermoid cyst is very rare, the following two cases are being reported with short review of the literature.

Review:

Meyer has noted the incidence of malignancy in 1.7% of 1268 cases of dermoid cysts. Nearly 150 cases have been reported. Peterson in his review stated the incidence of malignant change in dermoid cyst as 1.8%. Blackwell *et al* (1946) found malignant change in 3 out of 225 dermoid cysts (14%). Alznauer stated that 63 cases of squamous epithelioma in dermoid cyst were reported. Shaw found the incidence of malignant change in 4 to 5% of dermoid cysts. Scully and Kelly have found 1.7% incidence of malignant change (8 cases), of squamous cell carcinoma, 5 of sarcoma 2, carciconoid 1. Grace Ramachandran *et al* found incidence of malignancy in 3.12% of 182 cases of dermoid cysts, epidermoid cancer being common. According to Matz the incidence of epidermoid carcinoma was

80%; adenocarcinoma 10% and sarcoma 8%.

In a review, Matz stated that the incidence of anaplastic change in one area of a dermoid cyst was 2%.

Prognosis:

Alznauer reported 87.5% mortality in 32 cases and Novak reported 6% 5 years survival. Matz found 6% survival when there were metastases with ascites and intestinal obstruction and 75% 5 years cure with squamous cell cancer without metastases and spill of the content. Peterson stated 5 year survival rate of 15% in all cases and 63% survival in cases without metastases.

Case 1

Mrs. Ch. aged 45 years, was admitted on 8-4-70, with complaints of pain in the abdomen since 3 months, and mass per abdomen-2 months.

Para six, all full term normal deliveries, last child 6 years old. Menstrual cycles 5/30 days, regular, profuse flow. Last menstrual period 2 months.

Abdominal Examination: A solid mobile tumour was felt in the lower abdomen, on the left side, size of 18 weeks' pregnancy. There were no tenderness and no ascites.

Bimanual Examination: Uterus retroverted, and normal in size. The solid tumour was felt in the left fornix and was mobile.

Laparotomy on 11-4-70 under spinal anaesthesia by subumbilical incision. Ova-

*Professor of Obstetrics & Gynaecology, Guntur Medical College, Guntur & Obstetrician and Gynaecologist, Govt. General Hospital, Guntur. (Formerly): Professor of Obstetrics & Gynaecology, Kurnool Medical College.

**Assistant Professor of Obstetrics & Gynaecology, Kurnool Medical College, Kurnool.

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rian tumour arising from left side, partly solid and partly cystic and adherent to uterus was observed. It was burrowing below the anterior leaf of the broad ligament and was adherent to the walls of the pouch of Douglas. Right tube and ovary were normal. As the tumour could not be mobilised total abdominal hysterectomy with bilateral salpingectomy and ovariectomy was done. The cyst ruptured during separation, spilling sebaceous material into the peritoneal cavity.

Cut Section of Tumour: Balls of hair, subaceous material and a hard nodular area 2"/3" was present. Capsule was infiltrated.

Histopathology Report: Dermoid cyst undergoing malignant change squamous cell carcinoma.

Postoperatively, after a smooth convalescence, she had a course of prophylactic deep X-ray therapy to the pelvis.

At follow up examinations, last in May 72, there was no recurrence and her general condition was fair.

Case 2

Mrs. G., aged 40 years was admitted on 20-1-71, for an abdominal tumour, anorexia and loss of weight since 2 weeks.

Three full term normal deliveries last child 4 years old. Three abortions, last abortion 1 year back. Menstrual cycles 5/30 days normal flow, painless; last menstrual period 1 week ago.

General Examination: She was an ill nourished woman.

Per Abdomen: The mass was 24 weeks' pregnancy size, ascites was present. Liver and spleen were not palpable.

Bimanual Examination: Prolapse of the uterus, third degree, uterus of normal size. A hard fixed mass was felt through the right and anterior fornices. Diagnosis of malignant ovarian tumour was made. X-ray chest showed no secondaries.

On 6-2-71, laparotomy was done under general anaesthesia with subumbilical incision, secondaries were noticed on the omentum and parietal peritoneum. A plaque 3½" anteriorly on the parietal left side peritoneum was seen which was causing pain and tenderness over the tumour. The smooth, hard tumour was arising from

the left ovary. There were no secondaries in the liver, spleen and intestines. Right ovary and tube were normal. Right salpingoophorectomy and left ovariectomy were done.

Cut Section of Tumour: Sabaceous material and hair were present in the tumour. A hard, solid mass was present. 2"/3"—dermoid cyst undergoing malignancy.

Histopathology Report: Teratoma with predominantly epidermoid, structurés. Some cells were undergoing malignant change. The tumour was infiltrating into the tube.

Postoperatively: On 8-2-71, dyspnoea and pain in abdomen were present Endoxon 200 mg I.V. from 7-2-71—2 days. 25-2-71. Abdominal distension was present, due to subacute intestinal obstruction. Deep X-ray therapy was given from 17-2-71 to 22-2-71. 5-3-71—Patient was in distress due to intestinal obstruction and expired on 6-3-71.

Comments

At Kurnool General Hospital, during 10 year period there were 22 cases of dermoid cysts with malignant change in 2 cases (10% incidence). In the above period there were 43 cases of malignant ovarian tumours. Papillary cyst adenocarcinoma 18, pseudomucinous cystadenocarcinoma 7, solid adenocarcinoma (anaplastic) 11, dysgerminoma 1, granulosa cell carcinoma-4, teratoma-1, lymphosarcoma-1.

The ages of the patients were 40 and 45 years, the same (45.4 years) as reported in the literature. The diagnosis was made in the first case after section of the tumour and in the second case, it was obvious at laparotomy, from the presence of the metastases and a plaque of 3½" in the parietal peritoneum of anterior abdominal wall.

Treatment was surgical, total hysterectomy with bilateral ovariectomy and salpingectomy in the first case and only ovariectomy was possible due to fixity

and adhesions with other structures in the second case. The value of deep X-ray therapy given in the second case is doubtful.

The first case with malignancy confined to the cyst is alive and well without recurrence, two years after the operation. The second case with intraperitoneal metastases had incomplete surgery (left ovariectomy) and she died one month later, due to intestinal obstruction.

Clinical features of malignant dermoid cyst are fixation of tissue with adhesions, predisposition to rupture during operation, appearance being benign externally. The area of malignancy is represented by nodular papillary or cauliflower-like appearance, projecting inwards from the cyst wall or sometimes extending outwards with adhesions of viscera to the surface of the cyst. Peterson reported at laparotomy evidence of metastases in 64% of cases and emphasised careful examination of cyst wall for evidence of malignancy. Haines and Taylor described white, oval plaque in malignancy arising from dermal lining of the dermoid cyst. There is a risk in benign cystic teratoma of the malignant areas being easily overlooked at operation. Scully and Kelly state that malignant change should be suspected if there is an area of thickening and nodulation in the wall of the cyst.

Summary

Two cases of malignant changes in dermoid—one alive 2 years after radical sur-

gery and the second fatal due to intestinal obstruction 1 month after incomplete surgery are reported

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See Figs. on Art Paper VIII