

Descending colon adenocarcinoma with spermatic cord metastasis: Report of two cases and review of the literature

Xiao-Wei Wang¹, Wei-Feng Lao², Lin-lin Chen³,
Hong-bo Zhu⁴, Xue-feng Huang⁵, Wei-Fang Mao⁶

ABSTRACT

Metastatic carcinoma of the spermatic cord from colon cancer is extremely uncommon. The prognosis of metastatic spermatic cord cancer is poor. Resection of the metastasis and systematic chemotherapy may improve the prognosis. We report two cases and review of the literature. A 81-year-old man presented with painless left scrotum mass 60 months after left hemicolectomy for a descending colon cancer. Biopsy of the mass confirmed a metastatic adenocarcinoma. He refused any further treatment. Following 16 months, he was in a poor quality of life with the mass enlarged and ulceration. Another 66-year-old man presented with painless left scrotum mass 25 months after left hemicolectomy for a descending colon cancer. Radical orchidopidymectomy followed by 7 cycles of FOLFOX4 chemotherapy was performed. Histological examination showed both mucinous adenocarcinoma in primary and secondary tumor. He was free from disease 20 months after diagnosis.

KEY WORDS: Spermatic Cord Metastasis; Colon Adenocarcinoma.

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INTRODUCTION

Metastatic carcinoma to the spermatic cord is extremely uncommon. Adenocarcinoma metastasis to the spermatic cord generally occurs in gastrointestinal tract, followed by pancreas,

prostate and kidney. Here, we report two cases of metastatic spermatic cord adenocarcinoma from descending colon adenocarcinoma and review the English literature.

CASE REPORT

Case 1: A 81-year-old man with abdominal pain was diagnosed as descending colon adenocarcinoma in August 2005. He underwent a left hemicolectomy but refused adjuvant chemotherapy. The histological result was moderately differentiated adenocarcinoma, 40 mm × 50mm × 50 mm in size. The tumor penetrated the serosa layer, with one excised positive regional lymph node without extranodal extension stage IIIb (pT3, pN1a, cM0). Five years later, he was referred to our hospital again for a painless mass of his left scrotum. Physical examination showed a medium hard ovoid mass with smooth surface, 30mm×20mm in size and no tenderness. Laboratory data indicated CEA level elevated. Neither liver nor lung metastasis but recurrent pelvic nodules and sperm cord mass were detected by

1. Xiao-Wei Wang,
 2. Wei-Feng Lao,
 3. Lin-lin Chen,
 4. Hong-bo Zhu,
 5. Xue-feng Huang,
 6. Wei-Fang Mao,
- 1-6: Department of Colorectal Surgery,
Sir Run Run Shaw Hospital,
College of Medicine,
Zhejiang University, Hangzhou 310016,
Zhejiang Province, China.

Correspondence:

Dr. Wei-Fang Mao,
Department of Colorectal Surgery, Sir Run Run Shaw Hospital,
College of Medicine, Zhejiang University, Hangzhou 310016,
Zhejiang Province, China.
E-mail: drmaoweifang@gmail.com

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computed tomography. Fine needle aspiration biopsy of scrotal mass confirmed moderately differentiated adenocarcinoma. The patient refused any treatment. He was still alive 16 months to recurrence but in a poor life quality of tumor enlarged and ulceration, suffered from indwelling catheter because of urinary retention.

Case 2: A 66-year-old man with hemafecia and changes in bowel habit was diagnosed as descending colon adenocarcinoma in February 2008. He underwent a left hemicolectomy, the histological examination showed a mucinous adenocarcinoma measuring 70 mm × 50mm × 50 mm in size. The tumor penetrated the serosa layer, involving the muscular layer of small intestine with two excised positive regional lymph nodes without extranodal extension staged IIIc (pT4b, pN1a,cM0). The patient refused adjuvant treatment in the first 3 months, then he received only 5 cycles of adjuvant chemotherapy with FOLFOX4 regimen until 6 months after colectomy. He was regularly followed up with physical examination, abdominal ultrasonography and detection of serum carcinoembryonic antigen (CEA) every three months. Twenty five months later, he was referred to our hospital due to a painless mass in his left scrotum. Physical examination showed a medium hard ovoid mass with smooth surface, 20mm×15mm in size and no tenderness. Laboratory data indicated no abnormal values. Neither liver nor lung metastasis was detected by computed tomography and PET-CT. The patient was treated with left radical orchiectomy followed by 7 cycles

of chemotherapy with FOLFOX4 regimen. The resected specimen, a 20mm × 15mm × 15mm, solid, gray/red tumor, located in the left spermatic cord. Microscopically, the tumor was a mucinous adenocarcinoma which had not invaded the testicle and epididymis, spermatic cord margins were negative. He was free from disease 20 months after orchiectomy.

DISCUSSION

It is well known that the most common sites of metastasis from colorectal carcinoma are liver, lung and bone, however, metastases to tonsillar, breast and skin have also been reported. Metastatic carcinoma to the spermatic cord is extremely uncommon. The first case of spermatic cord carcinoma was reported in the middle of 19th century by Lesauvage, and only several cases were reported in the English literature. Metastatic carcinoma to the spermatic cord generally occurs in gastrointestinal tract, followed by pancreas, prostate and kidney. We herein present two cases of metastatic spermatic cord carcinoma from primary descending colon adenocarcinoma and review the English literature. Including the present cases, only seven cases of metastatic spermatic cord carcinomas from colorectal carcinoma have been reported in the English literature¹⁻⁵ (Table-I).

The patients were 62 to 81 years old (median, 70 years old). The sites of the primary lesion were the cecum in two cases, the descending colon in three cases, the sigmoid colon in one case, and synchronous multiple primary carcinoma in one case. The

Table-I: Reported cases of metastatic sperm cord tumor from colorectal carcinoma in the English literature.

No.	First author	Year	Age	Primary site ¹	Differentiation ²	Interval (mo) ³	Location	Treatment	Prognosis (mo)
1(7)	Polychronidis A	2002	63	S	mucinous	0	Left	Orchiectomy and Colostomy	nr
2(8)	Paravastu SC	2007	62	D	poorly	0	Left	Orchidectomy and Chemotherapy	18 alive
3(9)	Karagoz B	2008	68	C	nr	39	Left	Orchiectomy and Chemotherapy	6 alive
4(10)	Galanis I	2009	80	S,C,A	nr	0	Right	Orchiectomy and Exploratory laparotomy	0
5(11)	Ishibashi K	2009	71	C	well	12	Right	Orchiectomy	15 alive
Case1	Present case	2011	81	D	moderately	60	Left	Biopsy	16 alive
Case2	Present case	2011	66	D	mucinous	25	Left	Orchiectomy and Chemotherapy	20 alive

1 C = cecum, A = ascending colon, D = descending colon, S = sigmoid colon; 2 Well = well-differentiated adenocarcinoma, moderately = moderately-differentiated adenocarcinoma, poorly = poorly-differentiated adenocarcinoma, mucinous = mucinous adenocarcinoma, nr = not referred; 3 Interval = the time between the diagnosis of colorectal carcinoma and the development of metastatic sperm cord carcinoma.

tumor differentiations of the primary lesions were well-differentiated adenocarcinoma in one case, moderately- differentiated adenocarcinoma in one case, poorly-differentiated in one case, mucinous adenocarcinoma in two cases, and undocumented in two cases. The metastatic sites were right-sided in one case and left-sided in six cases. The metastatic sperm cord carcinoma and the primary adenocarcinoma were found simultaneously in three cases. The interval between the diagnosis of colorectal carcinoma and the development of metastatic sperm cord carcinoma were ranged from 0 to 60 months, with a mean time of 19.4 months. The patient outcomes were documented in six of the seven cases. The median survival period was 12.5 months.

The exact mechanism of cancer metastasis from the colon to the spermatic cord is not clear. The potential ways of metastatic tumor spread to the spermatic cord and/or intrascrotal contents include retrograde lymphatic extension, direct invasion or extension, arterial embolism, retrograde venous extension or embolism, and retrograde spermiduct extension.^{6,7} In our cases the possibility of haematogenous spread could be excluded, supported by the evidence of without liver or lung metastasis. Retrograde lymphatic spread through retroperitoneal lymph nodes and direct invasion were considered as the most probable mechanism of extension.

The prognosis of metastatic cord carcinoma is poor, and metastasectomy represents the potential curative way to improve the survival. The median overall survival after hepatic metastasectomy for colorectal cancer metastases was 36 months⁸, 32.9 months after pulmonary metastasectomy⁹, and less than 12 months after cerebral metastasectomy.¹⁰ The analysis of the reviewed cases and our cases showed that the survival after metastasectomy of the spermatic cord was similar with that after cerebral metastasectomy, much shorter than those after hepatic and pulmonary metastasectomies. In

addition, the survival after metastasectomy and systematic chemotherapy (14.6 months) seemed to be longer than that after metastasectomy only (10.3 months). And the collection of additional cases is needed to conclude the efficacy of systematic chemotherapy for spermatic cord metastasis.

In conclusion, metastatic spermatic cord carcinoma from colon cancer rarely occurs, and the prognosis is poor. Resection of the metastasis with systematic chemotherapy may improve the prognosis.

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