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Synchronous Tumours of the Colon and Rectum

Kolon ve Rektumun Senkronize Tümörleri

TAMER AKÇA[1], AHMET DAĞ[1], TAHSİN ÇOLAK[1], MEHMET ÇAĞLIKULEKÇİ[2], MUSA DİRLİK[1], ETHEM ŞAHAN[1]
[1]Mersin Üniversitesi Tıp Fakültesi Genel Cerrahi Ana Bilim Dalı, [2]Yedi Tepe Üniversitesi Tıp Fakültesi Genel Cerrahi Ana Bilim Dalı

ÖZET

Amaç: Senkronize kolorektal tümörler (SKT) klinik olarak nadir görülen. Saptandığında ise ameliyat stratejisi ve ameliyat sonrası takip protokolü değişmektedir. Bu yazımızda SKT'li olguların özelliklerini ortaya koymayı amaçladık.

Materyal ve Metod: Olguların cins, yaş, başvuru şikayetleri, ilk şikayetten tanıya kadar geçen süre, tanı yöntemi, tümör sayısı ve yerleşimi, cerrahi tedavi yöntemi, tümörün histopatolojisi ve evresi ile yaşam süreleri değerlendirildi.

Bulgular: Olgularımızın 10'u erkek, 3'ü kadın olup yaşları 46-92 arasında değişmekte idi. Olguların 9'u ameliyat öncesi dönemde çeşitli tanı yöntemleri ile teşhis edilirken, 4 olguya ise ameliyat sırasında senkron tümör tanısı kondu. Onbir olguda 2, iki olguda ise 3 tümör saptanırken, 4 olguda karaciğer metastazı mevcuttu. Tüm olgulara uygun kolon rezeksiyonları uygulandı. Üç olguda da karaciğerdeki lezyonlar için metastatektomi gerçekleştirildi. Dört olgu ameliyat sonrası ikinci, dördüncü, altıncı ve dokuzuncu aylarda kaybedildi.

ABSTRACT

Purpose: Synchronous colorectal tumours (SCT) are rare lesions. When these tumours are detected, operative strategy and postoperative follow-up protocols must be altered. The aim of this study is to present features of patients with SCT.

Material and Methods: Gender, age, presentation, duration of symptoms, diagnostic techniques, location and number of tumour, surgical techniques, histopathology, stage of tumour and duration of survival evaluated.

Results: There were10 male, 3 female patients with aged between 46-92 years. Diagnoses had been made in the preoperative period in nine patients and during surgery in four patients. Two SCT were detected in 11 patients, 3 SCT were detected in 2 patients and metastasis to liver was detected in 4 patients. All patients were treated with various types of colon resection.
Metastatectomy were added in 3 patients. Nine patients died in postoperative second, forth, sixth and ninth month. Five patients survived between 1 to 53 months.

Conclusion: Complete preoperative evaluation in order

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Dr. Ahmet Dağ
Mersin Üniversitesi Tıp Fakültesi, Zeytinlibahçe Cad.
33079 Mersin - Türkiye
Tel: 0324.3374300, 0532.3067082
e-mail: dahmetdag@yahoo.com

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Dokuz olgu 1-53 ay arasında yaşam süreleri göstermişlerdir. Sonuç: Kolorektal kanser nedeniyle başvuran olgularda tam bir preoperatif değerlendirme sonucu senkron tümör tanısının konabilmesi çok önemlidir. Bunun mümkün olamadığı durumlarda ameliyatta yapılacak dikkatli bir eksplorasyon ile uygun cerrahi girişim ve sonrasında uygulanacak sıkı takiplerin bu olguların tedavisine önemli katkı sağlayacağı kanaatindeyiz.

Anahtar Kelimeler: Kolon, Kolonoskopi, Rektum, Senkronize tümör

to detect synchronous tumours is very important in patients admitted with colorectal tumours. If this cannot be achieved, we think that careful exploration during surgery, selection of appropriate surgical method and strict follow-up after surgery are very important measures in the treatment of these patients

Key words: Colon, Colonoscopy, Rectum, Synchronous tumour

Introduction

Two or more primary colorectal carcinomas detected in a single individual simultaneously is named synchronous colorectal tumours (SCT). They are clinically rare entity and studies reported the incidence of SCT at a rate of 2-9% in all colorectal tumors.[1,2] In addition these cases might have benign lesions with a rate of 25-34.3%. The prognosis of SCT is bad compared with other colorectal carcinomas. Though, advences in the colonoscopy and barium enema, the rate of SCT that detected preoperatively is not satisfactory. Therefore, a surgeon must keep in mind the possibility of SCT in patients with colorectal cancer to make a careful exploration. Due from the presence of SCT will cause changes in the treatment and follow-up, preoperative diagnosis is important. In this study, we aimed to present clinical features, diagnosis and treatment of our 13 cases with SCT.

Material and Methods

Between September 2000 and August 2009, 13 cases diagnosed with endoscopically, radiologically or surgically as ''Synchronous colorectal tumours'' identified from records at the Department of Surgery, Mersin Medical Faculty, Mersin, Turkey, were reviewed retrospectively. Patients were evaluated according to gender, age, duration of time between the setting of first symptoms to diagnosis, techniques used for diagnosis, location and number of tumour, coexistence of GIST tumour, type of surgical technique, histopathology and stage of tumour and duration of survival.

Results

The study group consists of 10 male (76.9%) and 3 female (23.1%), with a mean age of 63 years (range 46-92 years). 8 patients (61.5%) were complaining of weight loss more than 10% of their weight. Other presenting signs and symptoms include 5 patients (38.4%) with abdominal pain, 3 patients (23%) with rectal hemoragy, 3 patients (23%) with acute mechanic bowel obstruction.The mean of duration between the setting of first symptoms to diagnosis was 5.5 month (2-12 month). In 9 patients that SCT detected preoperatively, colonoscopy and/or colongraphy, Abdominopelvic Computed Tomography (CT) and/or Ultrasound (US) were done. US and BT was done for other 4 cases that SCT detected intraoperatively, but these diagnostic tools have failed to detect SCT. Two cases had a history of colorectal malignancy in their family.

Two synchronous tumours were detected in 11 patients (84.6%), 3 synchronous tumours were detected in 2 patients (15.7%). Metastasis to liver was detected in 4 patients. Between the two tumors at least 10 cm distance were found. In one of these cases polyps in the colon were also observed. One case presented with abdominall wall and bladder invasion. Anatomic localisation of the tumors were included, 5 lesions in sigmoid colon, 4 lesions in left colon, 4 lesions in transvers colon, 3 lesions in rectum, 3 lesions in hepatic flexura, 4 lesions in splenic flexura, 2 lesions in right colon and 2 lesions in caecum. Demografics and surgical management were presented in Table 1.

Table 1. Demographics and surgical procedures of patient.

Gender	Age	Presenting symptoms / Duration	LOCATION			
			Primary Tumour	Secondary Tumour	Other	Surgery
F	65	Abdominal Pain, vomiting/ 2 months	Sigmoid colon	Hepatic flexura	Invasion abdominal wall and bladder	Total abdominal colectomy + Ileorectostomy + Left uretral stent + Partial systectomy
F	55	Abdominal Pain, Weight loss/ 6 months	Splenic flexura	Sigmoid colon	---	Advanced left colectomy
F	59	Rectal hemoragy, Weight loss / 5 months	Splenic flexura	Transvers colon	---	Advanced left colectomy
M	48	Weight loss / 7 months	Left colon	Splenic flexura	Hepatic flexura + Liver right lobe+ Polyp in left colon	Advanced left colectomy + metastectomy
M	47	Acute mechanical bowel obstruction, Weight loss / 6 months	Transvers colon	Hepatic flexura	Liver left lobe	Advanced right colectomy
M	76	Constipation, Rectal hemoragy, 6 months	Rectum 7th cm	Sigmoid colon	Liver right lobe metastases	Low anterior resection + metastectomy
M	46	Abdominal Pain, Weight loss / 5 months	Rectum 3th cm	Right colon	Caecum	Total proctocolectomy + end ileostomy
M	55	Abdominal Pain, Weight loss / 3 months	Left colon	Transvers colon	---	Advanced left colectomy
M	62	Rectal hemoragy, Weight loss / 12 months	Rectosig-moid	Hepatic flexura	Caecum	Subtotal colectomy + Ileorectostomy
M	50	Constipation, Abdominal Pain, / 6 months	Sigmoid colon	Left colon	---	Advanced left colectomy
M	61	Acute mechanical bowel obstruction, weakness / 3 months	Sigmoid colon	Splenic flexura	---	Advanced left colectomy
M	92	Acute renal failure, invagination, weakness / 2 months	Right colon	Transvers colon	---	Advanced right colectomy
M	66	Rectal hemoragy, Weight loss/ 6 months	Sigmoid colon	Sigmoid colon	Liver metastases	Low anterior resection

Table 2. Stage of tumours and prognosis.

Gender/Age	LOCATION			Survey (Months)
	Tumour [AJCC/TNM (STAGE)]			
	Primary Tumour	Secondary Tumour	Other	
F / 65	pT4 N0 M1(IV)	pT4 N0 M1 (IV)	Liver metastases	EXITUS (2 ay)
F / 59	pT3 N1 M0 (IIIB)	pTis N0 M0 (O)	--	LIVING (19 ay)
F / 55	pT3 N1 M1 (IV)	Pt2 N0 M1 (IV)	Liver metastases	EXİTUS (9 ay)
M / 55	pT4 N2 M0 (IIIC)	pT2 N2 M0 (III)	--	EXITUS (4 ay)
M / 48	pT4 N1 M0(IIIB)	pT3 N0 M0 (IIB)	pT3N0M0 (IIB) + Tubular adenoma	LIVING (8 ay)
M /47	pT3 N2 (IV)	pT2 N2 (IV)	Liver metastases	LIVING (6 ay)
M / 76	pT4 N2 (IV)	pT2 N2 (IV)	Liver metastases	LIVING (11 ay)
M / 46	pT2 N0 M0 (I)	pTis NX M0	pT3 N1 M0 (IIIB)	LIVING (53 ay)
M / 62	pT2 N0 M0 (I)	pT2 N0 M0 (I)	pT1 N0 M0 (I)	LIVING (14 ay)
M / 50	pT3 N1 M0 (IIIB)	pT2 N0 M0 (I)	--	LIVING (24 ay)
M / 61	pT4 N2 M0 (IIIC)	pT2 N0 M0 (I)	--	EXITUS (6 ay)
M / 92	pT3 N0 M0 (IIA)	pT2 N0 M0 (I)	--	LIVING (1 ay)
M / 66	pT4 N1 M1 (IV)	pT2 N0 M1 (IV)	Liver metastases	LIVING (8 ay)

Wide of colon resection was performed according to the localisation of lesions.

Advanced left colectomy was performed in 7 patients, advanced right colectomy was performed in 1 patient, low anterior resection was performed in 2 patients, total proctocolectomy and end ileostomy was performed in 1 patient, subtotal colectomy and ileorectostomy was performed in 1 patient, total abdominal colectomy and ileorectostomy and left uretral stent and partial systectomy was performed in 1 patient (Table 1).

Metastasectomy were performed for three patients with liver metastases that 1 cm in size. The patient with 5 cm liver metastases had been left to be evaluated after adjuvant chemotherapy.

Four cases died postoperatively after two, four, six and nine months. Other 9 patients are in the follow-up period between 1-53 months. All of the cases reported as adenocarcinoma and the stage and prognosis are presented in Table 2 according to the TNM classification of American Joint Commitee on Cancer (AJCC 2002).

Discussion

The freguency of synchronous colorectal cancer in all colorectal cancers have been established as approximately 2-9%.[1,2,4] This frequency increases to 10–20% in patients with familial adenomatous polyposis, hereditary non-polyposis colorectal cancer and ulcerative colitis.[5] Giuliani *et al*. reported a case with a primary colorectal tumor that also had a tumour in the stomach.[6] Hersek et al. have been reported a 14% SCT frequency based on their experience in 122 patients that operated for rectal cancer.[7] In cases of carcinoid tumors, albeit rare, also has the possibility of synchronous colorectal tumor development.[8] In our cases, 3.8% frequency was found. Adenoma-carcinoma transformation is the most frequent pathological process in the development of colorectal cancer.[9] Recently, the prevalence of colorectal polyps in the right colon begin to rise, therefore the investigation of colon especially in elderly patients has been required.[10] Although, colonoscopy and barium enema are the major diagnostic tools in the diagnosis of colorectal tumours, they are sometimes insufficient to detect the presence of synchronous tumour.[11,12] The main reason that suggested for this situation was the prevention of advanced distally located tumor to pass proximally for detection of second tumor. In addition, with inadequate bowel preparation a complete evaluation might not be made.[13] In preoperative period colonoscopy and computed tomography have been performing routinely in our university. However colonoscopy has not performed by us. We are getting support from gastroenerology clinic for this situation. Naturally

colonoscopy can be failed in some cases. Repeating colonoscopy in this cases sometimes may not be possible pratically. In addition as some cases underwent surgery urgently, unfortunately colonoscopy had not be performed. However it is clear that colorectal surgeons must perform colonoscopy routinely and keeping colonoscope in operating room may decrease some risk factors. However the fact that our country a few of surgery clinics have this facilities. Therefore, the importance of US and CT during the preoperative diagnosis is clear. In present study in four cases the presence of synchronous tumors could not be detected with preoperative diagnosis tools. Colonoscopy could not pass the strictures and this was the main reason for diagnostic difficulty. In addition, imaging techniques could not be successful in our two cases with carcinoma in situ stage.

In addition, during diagnostic research serum carjinoembryonic antigen and occult blood in feces were suggested to be screened.[14] However, consideration the existence of cases that tumours could not be determined despite all kinds of diagnostic tools, especially in urgent attempt for colorectal tumors that caused acute mechanical intestinal obstruction, a careful exploration of the entire colon should be kept always in mind.

With same reason careful follow-up period of patients operated for colorectal tumors might achieve positive contributions to survival.[15]

Investigation of SCT in the preoperative period affects not only the operation strategy, but also postoperative prognosis. Nikoloudis *et al.*[12] in their retrospective study with 283 patients suggested no significant difference among patients with synchronous multiple colon cancer and single colon cancer in terms of 5-year survival, although several studies reported negative results in the prognosis of patients with multiple tumors.[3,16] We are not to be able to make relevant comments because our patients did not generate long-term results of survival. The timing of the treatment of liver metastases detected as synchronously in colorectal tumors is still controversial. Chua and colleagues in their study with 96 consecutive patients, suggested that in appropriate cases with hepatic metastasis colud be resected more safely and effectively.[17] In three cases that we have identified relatively small liver metastases, we resected the metastases in the same operation. However, in our other case that we have operated in emergency conditions, the left liver lobe covered with metastatic mass, preoperative preparation was insufficient and patient had comorbid disease. Therefore, we have ended the operation after primary tumor resection and treatment of metastases had been left to be evaluated after adjuvant chemotherapy. In conclusion, a complete preoperative evaluation of synchronous tumor must be done in patients with colorectal cancer who were admitted for elective or emergency conditions. If this can not be possible to be done, we belive that with a careful exploration during surgery, application of appropriate surgical procedures and rigorous follow-up an important contribution can be achieved in treatment of these cases. As all colon tumors may keep silent for along time, it is a low probability to diagnose without full colonoscopy. Therefore for diagnosing SCT in preoperative time full colonoscopy is mandotary. However, in some situations like presence of obstruction cause complete or partial obstruction and due to this obstruction entering rorward with colonoscop ca not be possible. In addition due to tumor obstruction bowel cleaning may not be appropriate. In these situations SCT may be misdiagnosed easily. Computed tomography with three contrasts can minimalize this situation.

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