

Incidence of Colorectal Cancer in Saiful Anwar Hospital, Malang, January 2010- April 2015

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ABSTRACT

Background: Colorectal carcinoma is the third most common malignancy worldwide and the second most frequently found cause of mortality in the United States. In Indonesia, the number of colorectal cancer patients ranks 10th (2.75%) after other cancers (cervical, breast, lymph nodes, skin, nasopharyngeal, ovarium, soft tissue, and thyroid). The main key to success in managing this carcinoma is by detecting the cancer in early stage to enable curative treatment to be performed. But, unfortunately most patients in Indonesia seek for treatment in the advanced stage, causing low survival rate. Colorectal carcinoma requires multimodalities management and there is no uniformity of management approach in the national level. This study was aimed to identify the incidence, epidemiology, and risk factors which influence the occurrence of colon and rectal cancer in Saiful Anwar Hospital (SAH), Malang based on colonoscopy examination from January 2010-April 2015.

Method: Descriptive study, with total sampling method. Samples were colon and rectal cancer patients in SAH, Malang who underwent colonoscopy within January 2010 – April 2015.

Results: We found 472 eligible samples, which comprised of 50 individuals (11%) with the age of less than 36 years old, 326 individuals (69%) in middle aged group with the age of 36-65 years old, 96 individuals (20%) in older aged group with the age of more than 65 years old. Patients were predominantly male with 248 individuals (53%), while female patients were 224 individuals (47%). The most common location of the tumour was in the rectum, which was found in 380 individuals (74.15%). The most common clinical symptoms was bloody stool with mucus. From patients in this study, 87 individuals (18.43%) had history of smoking, 11 individuals (2.3%) had family history of cancer, and 58 individuals (12.28%) consumed traditional herbal drinks (jamu). Patients' characteristics of colon cancer based on anatomical pathology results showed that the most common was moderately differentiated adenocarcinoma in 33 patients (61.11%), followed by well-differentiated adenocarcinoma in 14 patients (25.93%), and the least common was those with anatomical pathology results revealing unspecific adenocarcinoma in 7 patients (12.96%). Characteristics of patients with rectal cancer based on anatomical pathology results showed that the most commonly found was moderately differentiated adenocarcinoma in 72 patients (54.15%), well-differentiated adenocarcinoma in 34 patients (25.56%), unspecific adenocarcinoma in 24 patients (18.04%) and the least common was those with anatomical pathology results of mucinous adenocarcinoma found in 3 patients (2.25%).

Conclusion: The conclusion of this study was colon and rectal cancer were frequently found in middle aged group. The most common location was rectum. Mainly found in male compared to female.

Keywords: colon cancer, rectal cancer

ABSTRAK

Latar belakang: Karsinoma kolorektal adalah keganasan ketiga terbanyak di dunia dan penyebab kematian kedua terbanyak di Amerika Serikat. Di Indonesia jumlah penderita kanker kolorektal menempati urutan ke-10 (2,75%) setelah kanker lain (leher rahim, payudara, kelenjar getah bening, kulit, nasofaring, ovarium, jaringan lunak, dan tiroid). Kunci utama keberhasilan penanganan karsinoma ini adalah ditemukannya kanker dalam stadium dini sehingga terapi kuratif dapat dilakukan. Namun sayang sebagian besar penderita di Indonesia berobat dalam stadium lanjut sehingga angka survival rendah. Karsinoma kolorektal memerlukan penanganan multimodalitas dan belum terdapat keseragaman secara nasional dalam pendekatan terapinya. Penelitian ini bertujuan untuk mengetahui insidensi, epidemiologi, serta faktor risiko yang mempengaruhi terjadinya kanker kolon dan rektum di RSSA Malang berdasarkan pemeriksaan kolonoskopi dari bulan Januari 2010-April 2015.

Metode: Studi deskriptif, menggunakan total sampling. Sampel yaitu penderita kanker kolon dan rektum di RSSA, Malang yang menjalani kolonoskopi dari bulan Januari 2010- April 2015.

Hasil: Ada 472 sample yang eligible, dimana yang berusia kurang dari 36 tahun 50 orang (11%), usia menengah 36 tahun – 65 tahun 326 orang (69%), usia tua lebih dari 65 tahun 96 orang (20%). Pasien laki-laki lebih banyak yaitu 248 orang (53%), sedangkan perempuan 224 orang (47%). Lokasi tumor di rektum paling banyak yaitu 380 orang (74,15%). Gejala Klinis terbanyak adalah BAB darah bercampur lendir. Penderita yang memiliki riwayat merokok 87 orang (18,43%), riwayat keluarga menderita kanker 11 orang (2,3%), riwayat mengkonsumsi jamu 58 orang (12,28%). Karakteristik penderita ca colon berdasarkan hasil histo PA menunjukkan bahwa yang terbanyak adalah Adenocarcinoma moderately differentiated sekitar 33 penderita (61,11%), 14 penderita (25,93%) dengan adenocarcinoma well differentiated dan paling sedikit 7 penderita (12,96%) dengan hasil PA adeno carcinoma unspesifik. karakteristik penderita ca rekti berdasarkan hasil histo PA menunjukkan bahwa yang terbanyak adalah Adenocarcinoma moderately differentiated sekitar 72 penderita (54,15%), 34 penderita (25,56%) dengan adenocarcinoma well differentiated, adenocarcinoma unspesifik 24 penderita (18,04%) dan paling sedikit 3 penderita (2,25%) dengan hasil PA Mucinous adenocarcinoma.

Simpulan: Kesimpulan penelitian adalah kanker kolon dan rektum banyak ditemukan pada usia menengah. Lokasi terbanyak adalah rektum. Paling banyak ditemukan pada pria dibandingkan wanita.

Kata kunci: Kanker kolon, kanker rektum

INTRODUCTION

Colorectal cancer is a malignant neoplasm deriving or growing in the internal structure of colon and or rectum. Generally, colon carcinoma is rarely found below 40 years old, except if it is a complication of ulcerative colitis, granulomatous colitis, familial multiple polyposis, Gardner syndrome, and Turcot syndrome. In the general population, the risk of colorectal cancer will obviously increase at the age of 50 years old and other sites of the colon. From epidemiological study, it is concluded that there is huge environmental influence, particularly diet, which play apparent role in the aetiology of colon cancer, which role is even bigger compared in rectal cancer.¹

Hereditary factor may also play role as the trigger of the occurrence of this type of cancer. Similar to the genetic factor of polyposis carcinoma syndrome which can be explained based on Mendel's law, which becomes two fold higher in every following decade. Rectal carcinoma is most commonly found in male

compared to female, but there was no evident difference of sex in carcinoma. Therefore, genetic predisposition in cancer may occur in the general population. First degree relatives in colorectal carcinoma patients has three fold risk compared to control.¹ Risk factors: (1) Polyp; (2) Idiopathic inflammatory bowel disease; (3) Ulcerative colitis; (4) Crohn's Disease; (5). Genetic factors; (6) Family history; (7) Hereditary colorectal cancer; (8) Diet; (9) Life style; (10) Age.²

METHOD

This study was a descriptive retrospective study performed in Gastroenterohepatology Subdivision of Internal Medicine Saiful Anwar Hospital (SAH), Malang with total sampling technique from the medical records of colorectal cancer patients in Endoscopy Unit SAH, Malang during the period of 1 Januari 2010 -April 2015.

The inclusion criteria of this study were (1) patients who were suspected to suffer from colorectal cancer

whose diagnosis was obtained through colonoscopy examination in SAH, Malang; (2) patient's medical record was obtained from endoscopy unit SAH, Malang. Meanwhile, the exclusion criteria of this study was incomplete medical records, in which the information on histopathological examination results, demographical data or patient's basic data were lacking.

Data obtained from the medical record was described and further analysed and percentage was calculated. Calculated data was then presented in graphical form. Results of data analysis in this study was presented in tabular with descriptive tables.

RESULTS

In Table 1, we presented characteristics description from 472 colorectal cancer patients included in this study. Patients' basic characteristics were as follow:

Table 1. Characteristics of colorectal cancer respondents

Characteristics	n (%)
Sex	
Male	248 (53%)
Female	224 (47%)
Age	
< 35 years old	50 (11%)
35-65 years old	96 (20%)
> 65 years old	326 (69%)
Risk factors	
Family history	11 (2.3%)
Smoking	87 (18.43%)
Drugs/ traditional herbal drinks (<i>jamu</i>) consumption	58 (12.28%)
Unknown	316 (66.94%)
Histopathology results of colon cancer respondents	
Unspecific Adenocarcinoma	7 (12.6%)
Moderately differentiated Adenocarcinoma	33 (61.11%)
Well-differentiated Adenocarcinoma	14 (25.93%)
Histopathology results of rectal cancer respondents	
Unspecific Adenoca	24 (18.04%)
Moderately differentiated Adenocarcinoma	72 (54.15%)
Well-differentiated Adenocarcinoma	34 (25.56%)
Mucinous adenocarcinoma	3 (2.25%)
Unknown/ no anatomical pathology results	286 (60.38%)

DISCUSSION

This study evaluated the prevalence and risk factors influencing the occurrence of colon and rectal carcinoma and compare the results in literature study. This study showed that colorectal cancer was most frequently found in male with 248 individuals (53%). Currently, colorectal cancer has been one of the most common cancer in Indonesia; data obtained from 13 cancer centres show that colorectal cancer is one of the most frequent cancer in male and female.^{3,4}

Age is the most relevant factor influencing the risk of colorectal cancer in most population. Colorectal cancer risk increases with age, particularly in male and female with the age of 50 years old or more, and only 3% of colorectal cancer occur in individuals with the age of less than 40 years old. Fifty percent of cancer is found in individuals aged ≥ 65 years old, incidence rate of 19 per 100000 population aged less than 65 years old, and 337 per 100000 in those aged more than 65 years old.^{1,2,5,6}

In this study, characteristics of colon cancer and rectal cancer patients based on age were 50 individuals (11%) with the age of less than 36 years old, 326 individuals (69%) in the middle aged group of 36–65 years old, and 96 individuals (20%) with the age of more than 65 years old. The results of this study was not in accordance with available reference as colon and rectal cancer were most commonly found in the middle aged group with the age of 36-65 years old: 326 individuals (69%).

It is predicted that 5000-7000 death due to colorectal cancer in America is associated with smoking. In this study, 87 individuals (18.43%) had history of smoking. Genetic abnormality seems to be able to mediate the progression from normal to malignant colon mucosa. Approximately half of all carcinoma and adenocarcinoma is correlated with mutation.^{2,7,8} The most important step in establishing the diagnosis of hereditary cancer syndrome is family history of cancer. In this study, 11 individuals (2.3%) had family history of cancer.

This study showed that characteristics of colon cancer patients based on anatomical pathology results were moderately differentiated adenocarcinoma in 33 patients (61.11%) as the most common, well-differentiated adenocarcinoma in 14 patients (25.93%) and unspecific adenocarcinoma in 7 patients (12.96%) as the least common. The obtained pathological anatomy results were not in accordance with the number of colon cancer patients in 5 years period; this could be caused by patients did not show the anatomical pathology results to the Gastroenterohepatology subdivision and therefore, there was no accurate data.

This study revealed that the characteristics of rectal cancer patients based on anatomical pathology results was moderately differentiated adenocarcinoma in 72 patients (54.15%) as the most common, well-differentiated adenocarcinoma in 34 patients (25.56%) and mucinous adenocarcinoma in 3 patients (2.25%) as the least common. The obtained pathological anatomy results were not in accordance with the number of rectal

cancer patients in 5 years period; this could be caused by patients did not show the anatomical pathology results to the Gastroenterohepatology subdivision and therefore, there was no accurate data.

Colorectal cancer occurred with the increase of age. Several additional risk factors, including family history of colorectal cancer, hereditary factor such as polyposis and non-polyposis colorectal cancer, and previous history of inflammatory bowel disease, polyp, and cancer.⁷⁻¹⁰

CONCLUSION

Based on the study results, it could be concluded that: (1) Number of colorectal cancer tend to increase every year; (2) Colorectal cancer was mostly found in middle aged group of 36-65 years old; (3) Most colorectal cancer patients were male; (4) Characteristics of colon cancer patients based on pathological anatomy results were moderately differentiated adenocarcinoma in 33 individuals (61.11%) as the most common; (5) Characteristics of rectal cancer patients based on pathological anatomy results was moderately differentiated adenocarcinoma in 72 individuals (54.15%) as the most common.

It is necessary to provide information to colorectal cancer patients about: risk factors of colorectal cancer, early symptoms of colorectal cancer with the expectation that patient will seek for treatment in early stage and enable curative treatment to be performed, importance of screening to all individuals particularly those aged more than 40 years old or those who has family history of one or more family members suffering from colorectal cancer, importance of routine control to achieve complete healing; importance of establishing a more complete and consistent medical record-keeping system for the benefit of hospitals, colorectal cancer patients, and for research purposes.

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