

Alcohol Abuse and Incidence of Different Types of Cancer: The Serious Risk of Cancer in Alcohol Consumers

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ABSTRACT

Introduction: Cancer is considered as a major health problem of the century, and as with other chronic diseases, occurs in any person, age group and any race. It is considered as a major health problem affecting the health of the community. Given that the International Agency for Research on Cancer has placed alcohol at the highest risk and as the first group of carcinogens, and so far, there have been few studies in the province of Khuzestan about the relationship between alcohol consumption and the incidence of various types of cancer. Therefore, the aim of this study was to determine the alcohol abuse in the incidence of various types of cancer and the serious risk of cancer in alcohol abusers.

Materials and Methods: This study included review of 2483 cancer patients from different types. The study is a retrospective cross-sectional descriptive analytic study that included records of cancer patients from different types in each age group and sex, diagnosed with the disease, and cases that had medical diagnosis other than the disease, and the cases that were incompletely filled out were excluded. The data in this study included demographic and clinical data of patients. Data were entered into SPSS software version 20 and analyzed by descriptive, analytical, and significant level of $p < 0.05$.

Results: The mean age of patients was 61.00 ± 43.36 years. The population studied in this study included 2,483 cancer patients. In this study 216 people had alcohol abuse and the rest had no use. Of these consumers, most of the cancer related to liver cancer was 40.2%. In this study, there was a significant relationship between alcohol consumption and liver cancer and gastrointestinal cancers ($p < 0.05$), and patients with these two types of cancer had higher alcohol intake than Other Cancer Patients. Also, consumers more than three times a week, more had gastrointestinal cancers, but consumers had less than three times a week, more had liver cancer.

Conclusion: In this study, cancer patients in several different types, had alcohol abuse. It is necessary to provide, the Ministry of Health, Treatment and Medical Education through the mass media, the necessary training for patients in this regard. All the medical science universities through health centers provide patients with a variety of research pamphlets on this subject. It is also necessary to prevent alcohol addiction in any way. And through the therapeutic centers, give the pamphlets about various researches in this regard to patients.

Key words: Alcohol abuse, Cancer, Types of cancer, Liver cancer, Incidence of cancer

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INTRODUCTION

Cancer is considered as a major health problem for the century and its increasing growth over the past two decades and its harmful effects on various aspects of human life are more than ever, it has caused concern to experts [1]. The increasing importance of examining changes in the expression of genes in the development of various types of cancers and other factors has led to in recent years; such molecular studies are of particular importance in studies of the etiology of the disease [2].

The pattern of occurrence of different types of cancer varies among populations and is related to factors such as occupational, social, nutritional issues, etc. [3]. The disease, like other chronic diseases, occurs in every person, age group, and race, and is considered as a major health problem affecting the health of the community [4]. In general, the incidence of some cancers, such as stomach cancer and its mortality, has declined dramatically in Western countries in recent years. But this is increasing in some countries, such as Iran, China, Ireland and Chile [3]. Detecting cancer is more than any other illness, an extremely unpleasant and unbelievable experience for anyone and patients face severe psychological reactions after diagnosis of cancer, and one of their senses is the impending death [5,6]. The global burden of cancer is

increasing due to aging and population growth as well as high-risk behaviors, especially smoking and environmental factors. Proper information on various cancers in specific geographical locations can help plan health services for the treatment and screening of high-risk groups [7].

Increasing the incidence of various types of cancer has addressed the researchers with several questions about the various causes of the disease [8]. One of the causes of cancer is diabetes. Epidemiological evidence suggests that increased type 2 diabetes is associated with an increased risk of certain specific cancers such as breast cancer, colorectal cancer, and several other cancers [9].

Another cause of cancer, according to past studies, is alcohol consumption. Given that the International Agency for Research on Cancer has placed alcohol at the highest risk and as the first group of carcinogens. Evidence suggests that alcohol increases the risk of developing a variety of cancers and is for a significant portion of preventable cancers [10]. And so far, there have been few studies in the province of Khuzestan about the relationship between alcohol consumption and the incidence of various types of cancer. Therefore, the aim of this study was to determine the alcohol abuse in the incidence of various types of cancer and the serious risk of cancer in alcohol abusers.

MATERIALS AND METHODS

This study is a retrospective cross-sectional analytical descriptive study and included a total of 2483 records from a variety of cases of patients with various types of cancer, that from 2016 to 2018, they were admitted to Shafa hospital and Baghaei hospital. The case file for patients with a medical diagnosis of any type of cancer referring to health centers in the city from 2016 to 2018, were studied and entered the study.

The required data for the study were extracted from patients' medical records from 2016 to 2018 in the medical records section of the hospitals. All cancer patients of different types in each age group and sex, which were diagnosed with the disease, were criteria for entering this study. Also, the exit criteria included records that had a medical diagnosis other than the disease, and cases that were incompletely filled were not used and were excluded.

License and Code of Ethics this article is taken from the faculty of Nursing and Midwifery of Shahid Beheshti University of Medical Sciences. In order to study the files and collect data, a written Letter of Introduction was taken from the Vice-Chancellor of Research the mentioned university. Then, records of patients referring to medical centers in the medical records department were used. The required information was collected through a checklist of a researcher-made. The data in this study included demographic and clinical data of patients such as gender, age, marital status, ethnicity, occupation, economic status, education level, and family history of cancer, history of alcohol abuse, history of chemotherapy, drug abuse, and history of diabetes.

Data was then entered into SPSS version 20 software and using descriptive statistical tests of frequency table, mean, standard deviation and variance and Chi-square, Chi-square Pearson analytical tests and significant level of $p < 0.05$ were analyzed.

RESULTS

The mean age of patients was 61.00 ± 43.36 years. Of these (58.2%) were females and the rest were males. The population studied in this study included 2,483 cancer patients.

In terms of jobs 34.3% housewives, 33.6% had free jobs, 25.0% were unemployed and the rest had government jobs. In this study, people who had government job, their alcohol consumption was higher than the rest of the population.

In this study, 77.9% of people had monthly income of up to 1.5 million tomans and the rest were above that. The relationship between economic status and alcohol abuse was significant and in patients with a better financial status was higher alcohol intake ($p < 0.0001$).

In the present study, a significant relationship was found between the history of alcohol abuse and the history of drug abuse with a history of diabetes ($p < 0.05$).

In this study, 216 patients had alcohol abuse history, of these consumers, 87 patients (40.2%) had liver cancer, 49 patients (22.6%) had gastrointestinal cancer, 43 patients (19.9%) had head and neck cancer, and 37 patients (17.1%) had leukaemia (Figure 1).

In this study 34.1% of cancers were gastrointestinal cancers, 13.0% of skin cancer, 12.9% of genital cancers and 10.3% was leukaemia. There is complete information on the frequency of other types of cancers (Figure 2).

In this study, there was a significant relationship between alcohol consumption and liver cancer and gastrointestinal cancers ($p < 0.05$), and patients with these two types of cancer had higher alcohol intake than other cancer patients. Also, consumers more than three times a week, more had gastrointestinal cancers, but consumers had less than three times a week, more had liver cancer.

Cancer patients with alcohol abuse more than cancer patients with drug abuse, had receive chemotherapy, but the relationship between these two variables was not statistically significant ($p < 0.02$). Also cancer patients with alcohol abuse more than cancer patients had more surgery, and the relationship between these two variables was statistically significant ($p < 0.05$).

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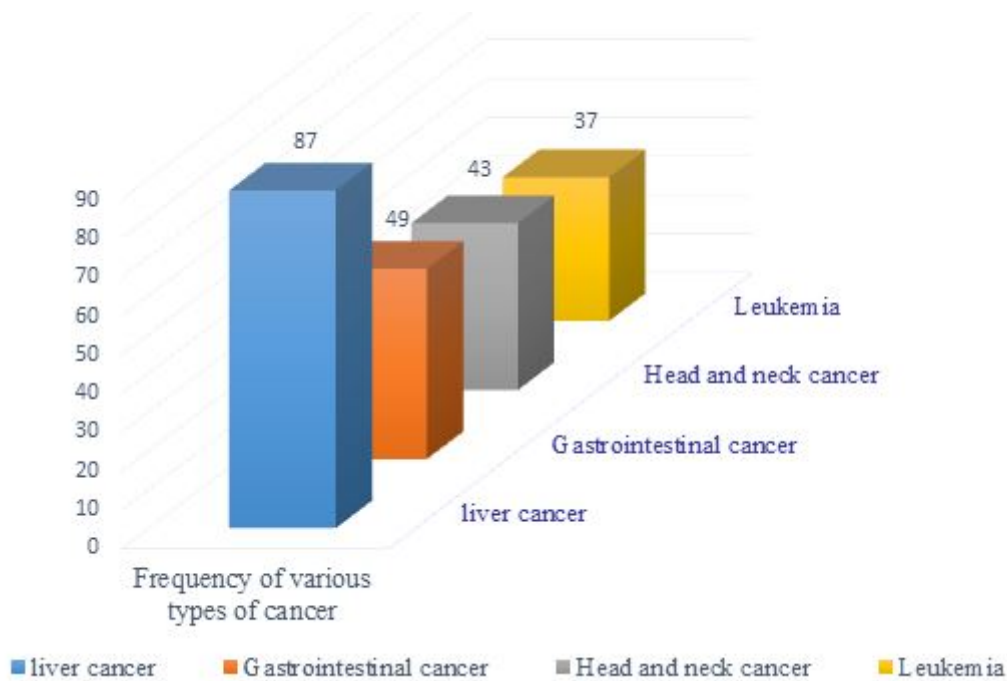


Figure 1: Frequency of various types of cancer in alcohol consumers

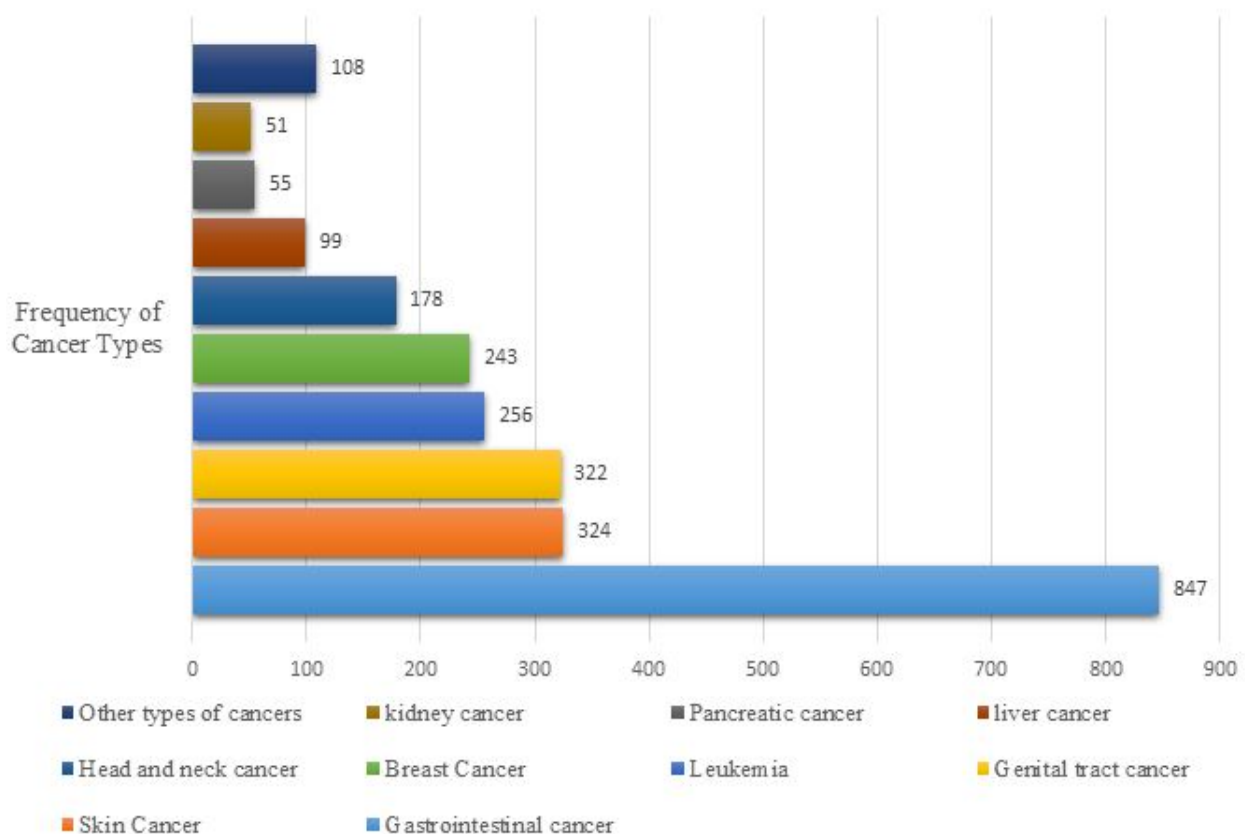


Figure 2: Frequency of different types of cancer in patients with this disease admitted to hospital of Shafa and Baghaei

DISCUSSION

Another cause of cancer, according to past studies, is alcohol consumption. Given that the International Agency for Research on Cancer has placed alcohol at the highest

risk and as the first group of carcinogens. Evidence suggests that alcohol increases the risk of developing a variety of cancers and is for a significant portion of preventable cancers [10]. And so far, there have been few studies in the province of Khuzestan about the

relationship between alcohol consumption and the incidence of various types of cancer. Therefore, the aim of this study was to determine the alcohol abuse in the incidence of various types of cancer and the serious risk of cancer in alcohol abusers.

In this study, 216 patients had alcohol abuse history, of these consumers, 87 patients (40.2%) had liver cancer, 49 patients (22.6%) had gastrointestinal cancer, 43 patients (19.9%) had head and neck cancer and 37 patients (17.1%) had leukemia. Among all the cancers, the highest percentage was related to gastrointestinal cancer with 34.1%. In one study, the highest percentage of cancer in men was gastric cancer (13.7%), lung cancer (10.7%), colorectal cancer (9.7%) and esophageal cancer (3.9%), and the highest percentage of cancer in women was breast cancer (11.7%), colorectal cancer (11.7%), ovarian cancer (5.8%), gastric cancer (5.7%) and esophageal cancer (5.8%) [11]. In another study, the most common gastrointestinal cancers in men over 65 were gastric cancer and the most common gastrointestinal cancer in women over 65 was esophageal cancer [12]. The cause of high gastrointestinal cancer in this study and previous studies can be due to high risk factors for gastrointestinal cancers in the research environment, such as lifestyle changes, lack of mobility and obesity, increased carbohydrate and fat intake, and reduced fiber intake, especially in young people, and also possibly genetic issues.

In this study, as stated above, the highest percentage of cancer among alcohol abusers was liver cancer. WHO research shows that ethanol is the most important carcinogenic agent in the body, which damages healthy cells and causes malignant masses in the human body. Simultaneous consumption of alcohol and tobacco also increases the risk of cancer by several times. According to studies on use of alcohol, the risk of squamous cell carcinoma and colorectal cancer increases. Heavy alcohol consumption is associated with an increased risk of gastric and pancreatic cancer. These risks also depend on genetic types. Carcinogens are mechanisms that play a key role in acetaldehyde due to their ability to damage DNA, alter the length of telomeres and cause ROS [13].

In this study, 10.3% of the patients had leukemia, which according to some studies, the most important causes of leukemia can be the variables of contact X-ray during pregnancy, a smoker in the family, father's job contact with chemicals, history of mother's contraceptive use and near home to strong power lines [14]. In this study, 13.0% of patients had skin cancer, which is quite reasonable due to weather conditions in Khuzestan province.

In this study, 77.9% of the people had income up to 1.5 million tomans, and the rest was above that. The relationship between the economic situation and alcohol abuse was significant, and people with a better financial situation had a higher alcohol intake. That is, patients with a better financial situation had more alcohol abuse and had more likely to different type of cancer.

Given the many indications that there is a link between alcohol abuse and the risk of cancer, but research on the impact of alcohol consumption on the development of disease in cancer patients is still in its early stages. For cancer cases that are known to be associated with alcohol consumption, alcohol consumption is expected to be relevant at the time of diagnosis and may be associated with the risk of recurrence of secondary cancer. This association was higher for patients with upper urinary cancers when they did not drink alcohol, compared to when they were dependent on the liver, which increased the risk of cancer mortality particularly among the average consumer compared with consumers [15].

Another study showed that among the survivors of upper respiratory cancer, continued use of alcohol after diagnosis is accompanied by a three-fold increase in the risk of recurrence of the primary tumor of the upper urinary tract [16]. In other studies, an increased mortality rate from breast cancer or a recurrence risk with moderate to severe alcohol levels has been observed [17,18].

In this study, there was a significant relationship between alcohol consumption and liver cancer and gastrointestinal cancers, and patients with these two types of cancer had higher alcohol intake than other Cancer Patients. Also, consumers more than three times a week, more had gastrointestinal cancers, but consumers had less than three times a week, more had liver cancer. The results of a study showed that in women with breast cancer positive estrogen receptor, alcohol abuse was reported by alcohol users seven times a week compared to those who did not consume, 90% more likely to have breast cancer [19]. Another study also found that alcohol consumption was associated with a lower survival [20]. More recently, cohort Meta-analysis studies among more than 209,000 cancer survivors showed a 17% increased risk of recurrence in the highest and lowest alcohol abusers [21].

People who are overweight are at greater risk, but even people at lower levels are at increased risk. However, more studies are needed to clarify the impact of alcohol consumption on cancer. Most studies have focused on direct effects of alcohol consumption and cancer treatment in patients with upper urinary cancers, because 34% to 57% of people continue to smoke and drink alcohol after cancer detection, and radiation therapy was associated with an increased risk of osteoporosis in patients with oral cancer and oropharyngeal disease [22-26].

The results of some studies suggest that alcohol abuse, be associated with treatment for cancer patients with longer hospitalization, longer term improvement, increased surgical procedures, and high health care costs [27-30].

Several studies have shown that several variables have contributed to the incidence of cancer. One of these variables is alcohol consumption and other variables such as diabetes also play a very important role. For example, in a study [31], the results indicate that diabetes increases the risk of colorectal cancer. Diabetes is a

chronic, metabolic, and very serious complication that can lead to high blood sugar levels in the absence of diet and lack of physical activity. And over time, complications appear in the person, which include complications in the eyes, the kidneys, the brain and other organs, also, one of the serious complications of diabetes is the onset of certain cancers in a person [32-38].

CONCLUSION

In this study, cancer patients in different types, have alcohol abuse. It is necessary to provide, the Ministry of Health, Treatment and Medical Education through the mass media, the necessary training for patients in this regard and medical sciences universities through health centers provide patients with a variety of research pamphlets on this subject. It is also necessary to prevent alcohol addiction in any way through the therapeutic centers, give the pamphlets about various researches in this regard to patients.

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CONFLICT OF INTEREST

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