

## RESEARCH COMMUNICATION

## Information Needs of Patients with Meningiomas

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## Abstract

The aim of this descriptive, cross-sectional study was to determine information requirements of patients with typical meningiomas after surgery. The study sample consisted of 20 patients who underwent surgery for brain tumours in neurosurgery clinics of a university hospital. Permission to conduct research was obtained from all patients and from the hospital. Before the surgery, a booklet was given to patients for training. Patients were followed up one, three, six and 12 months later by the phone after the surgery and asked to report their problems. All questions were recorded and answered. Data were collected by the socio-demographic, patient symptom and health status questionnaire. Descriptive data were analyzed using percentage and arithmetic averages. Comparative statistics were evaluated using chi-square. Patients wanted information about diet, physical therapy and rehabilitation, quick thinking difficulties, fasting, headache, irritability, personality change, fatigue, driving, deep vein thrombosis during the follow up. There was a significant difference between their health status and fear of seizures and recurrent tumor, forgetfulness, lack of concentration ( $p < 0.05$ ). Although they received health education and booklet, patients needed more information during the 12 months after surgery. Therefore it suggested that monitoring the patient's needs is necessary.

**Keywords:** Meningioma - information needs - Turkish patients

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## Introduction

Meningiomas are now the most common tumours of the central nervous system, which originate from the meningeal coverings of the spinal cord and the brain. They constitute approximately 13-26% of all intracranial tumours but accounting for almost half of all primary brain tumors. They are most often slow-growing benign tumors, however atypical or anaplastic tumors can be found in 6% of cases. They are generally diagnosed in adults older than 60 years, and the incidence increase with age. They occur about twice as often in women as in men. The symptoms occur depend on the location of the tumor (Bondy & Ligon, 1996; Riemenschneider & Perry, 2006; Brownstain & Stevenson, 2009; Sioka & KyritsisA, 2009). Primary goal of treatment is the complete removal of the meningioma. However, the decision of operation is given according to the clinical history of the patient, symptoms, accessibility of the tumour and estimation of the clinical benefit achievable by surgery. Surgery and radiotherapy can be applied to patients who have Atypical (Type 2) and anaplastic (Type 3) rapid growth meningiomas (Bindal et al., 2003; Brownstain & Stevenson, 2009; Sioka & KyritsisA, 2009). After surgery, some meningiomas recur because of anatomical problems such as their location at the skull base, and are subtotally resected. Because of

the risk of recurrence, follow-up of patients after surgery is important. After surgery, lots of different symptoms are occurred, and patients are requiring information and advice about symptom control and early diagnostic signs of recurrent during the follow-up. Also information need and behaviour of patients with meningioma are effected by many factors such as fear of paralyze or recurrent tumor (Lee-Jones et al., 1997; Krikelas, 1998; Whelan et al., 2000; ABTA, 2006; Brownstain & Stevenson, 2009). Generally patients want to take information about meningioma tumor, symptoms and management, diet and nutrition, exercise, complementary/alternative health care services, mental health counseling, counseling related to sexuality or infertility, family counseling, religious/spiritual counseling, adoption services, transportation assistance, child care during the follow-up (ABTA, 2006; Zebrack, 2008; Brownstain & Stevenson, 2009; Zebrack, 2009).

The first symptoms are usually due to increased pressure on the brain caused by the growing tumor. Headache and weakness in an arm or leg are the most common, although seizures, personality changes, or visual problems may also occur. Patients need to continue living with this diagnosis. Nurses and doctors give knowledge about symptoms control, memory skills, physical therapies, new ways to accomplish daily tasks, and

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**Table 1. Patients Perception of Health Status**

Perception	n	%
Very Good	8	40
Well	9	45
Bad	3	15
	20	100

workplace accommodations (ABTA, 2006; Brownstain & Stevenson, 2009).

## Materials and Methods

### Aim

The aim of this descriptive, cross-sectional study was to determine information requirements of patients with typical meningioma after surgery.

### Sample

The study sample consist of 20 patients (>18 years of age) who underwent surgery for brain tumours in neurosurgery clinics of a university hospital. It was taken permission to conduct research from all patients and from the hospital. Patients who reading, speaking, writing, tumor in supratentorial area, and Karnofsky Performance Status (KPS) score above 70 were included the study.

### Data Collection

Data were collected by the socio-demographic, patient symptom and health status questionnaire. Socio- demographic questionnaire contain information on age, gender, marital status, educational background, employment status, Glasgow Coma Scores (GCS) and KPS. Patient symptom questionnaire consist of the meningioma symptoms and signs of surgery complications. Health status of patients was evaluated as excellent/very good, good, fair/poor. Before the surgery, a booklet that contain information about pain, vomit and infection control, nutrition, drugs, deep vein thrombosis, seizures, physiotherapy, daily activity and exercises were given to patients for training. Patients were followed up one, three, six and 12 month later by the phone after the surgery. It was asked to report their problem from all patients before operations, one, three, six, twelve months after operations. All questions were recorded and answered.

### Data Analysis

Descriptive data were analyzed using percentage and arithmetic average. Comparative statistics were evaluated using Chi-square. Level of statistical significance was accepted  $p < 0.05$ .

## Results

60.0 % (n=12) of patients were women and 40.0 % of patient were men. The patients mean age was  $5.1 \pm 0.8$ . 80.0 % (n=16) of patients were married, 95% (n=19) of patients have health insurance, 50% (n=10) of patients with primary school and 35% (n=7) university graduates, 50% (n=10) of patients are unemployed. Glasgow Coma Scores were determined in all patients and found to be normal in one year.

Forty-five % of the patient's perceived of level of

**Table 2. Asked Questions by the Patients and Their Health Status**

Asked questions	Requirements Issues		Health Status			Statistic	
	n	%	Very good	Well	Bad	P	X <sup>2</sup>
Fear of Seizures	6	30	-	5	1	0.04	6.24
			8	4	2		
Antiepileptic Drug Use	12	60	3	7	2	0.23	2.92
			5	2	1		
Fear of Recurrent Tumor	11	55	2	6	3	0.05	5.87
			6	3	-		
Deep Vein Thrombosis	2	10	1	-	1	0.23	2.87
			7	9	2		
Physical Therapy and Rehabilitation	3	15	-	2	1	0.27	2.57
			8	7	2		
Alternative Treatment	2	10	1	-	1	0.23	2.87
			7	9	2		
Diet and Nutrition	11	55	3	5	3	0.17	3.44
			5	4	-		
Fasting	4	20	3	1	-	0.25	2.72
			5	8	3		
Exercise and Weight loss	3	15	1	-	1	0.23	2.87
			7	9	2		
Headache	3	15	1	2	-	0.62	0.93
			7	7	3		
Forgetfulness	6	30	-	4	2	0.04	6.24
			8	5	1		
Daily Activities	3	15	-	2	1	0.27	2.57
			8	7	2		
Start of Sexual Life	2	10	1	1	-	0.23	2.87
			7	2	9		
Alcohol Using	2	10	1	-	1	0.23	2.87
			7	9	2		
Driving	4	20	3	1	-	0.36	2.03
			6	7	3		
Insomnia / Fatigue	5	25	1	2	2	0.17	3.48
			7	7	1		
Start to Work	4	20	3	1	-	0.36	2.03
			6	7	3		
Lack of Concentration	6	30	-	4	2	0.04	6.24
			8	5	1		
Quick Thinking Difficulties	6	30	-	4	2	0.04	6.24
			8	5	1		
Irritability, Personality Change	7	35	2	4	1	0.70	0.70
			6	5	2		
Speech Impairment	7	15	2	3	2	0.43	1.68
			6	6	1		
Hopelessness, Not to Enjoy Life	4	20	1	3	-	0.36	2.03
			7	6	3		

health was well. And 15.0 % of patient's perceived of level of health was bad.

During 12 months follow up, patients wanted take information and asked questions about fear of seizures (30%), antiepileptic drug using (60%), fear of recurrent tumor (55%), deep vein thrombosis (10%), physical therapy and rehabilitation (15%), alternative treatment (10%), diet and nutrition (55%), fasting (20%), exercise and weight loss (15%), headache (15%), forgetfulness (30%), daily activities (15%), start of sexual life (10%), alcohol using (10%), driving (20%), insomnia / fatigue (25%), start to work (20%), lack of concentration (30%), quick thinking difficulties (30%), irritability, personality change (35%), speech impairment (15%), hopelessness, not to enjoy life (20%).

There was a significant difference between their health status and fear of seizures and recurrent tumor, forgetfulness, lack of concentration and quick thinking difficulties ( $p < 0.05$ ).

## Discussion

This study provides insight into various supportive care needs for meningioma of patients. They wanted to take information about maintaining or advancing of consciousness and dealing with physical, psychological distress and fear during the follow up. There also appeared to be a high demand for information and assistance with regard to level of consciousness, expectation, diet and nutrition, exercise, alternative treatment, sexual and social life. These study findings were consistent with the literature. These patients need drugs, seizures, physical distress, religious/spiritual and psychological counseling. Literature said that doctors, nurses, dieticians, physiotherapists can provide patients with information about how to care for themselves by telephone and face to face counseling (ABTA, 2006; Brownstain & Stevenson, 2009). This literature confirmed this study finding. Patients with meningioma had to be given information to follow-up at home once again emerged.

There were statistically significant differences in fear of seizures, antiepileptic drug using, and fear of recurrent tumor, forgetfulness, quick thinking difficulties and lack of concentration by health status. In particular, people who describe their health as good have more fear of seizures and recurrent tumor. Because as these people meet their health and they are afraid to live the old experience of illness again. They are experiencing fear of losing their health again and are requesting more information about disease and symptoms related to recurrence. Therefore, people who self-perceived health is even more anxiety sometimes. This obscurity is creating fear and individuals are more skeptical. These patients use their medication more than others. These findings are compatible with the literature (ABTA, 2006; Brownstain & Stevenson, 2009). It is thought the structural and chemical changes in the brain after surgery and tumor caused forgetfulness, quick thinking difficulties and lack of concentration. For enhancing memory exercises can help patients with these problems (Duncan et al., 2005; Ghisletta et al., 2006).

In conclusion, although they receive health education and booklet, patients need to take information during 12 months after surgery. Therefore it is suggested that monitoring the patient's during 12 months after surgery by phone, and be given consulting according to their problem and questions.

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