RESEARCH ARTICLE

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An Examination of the Factors, Which May Affect the Duration of Admission to the Hospital of Panic Diagnosed Patient in Surgical Pathology during and Pre-COVID-19 Pandemic

ABSTRACT

Objective: This study aimed to determine the duration of hospital admission of the panic diagnosed patients in surgical pathology, examine the factors that may influence hospital admission time, and identify the impact of the COVID-19 pandemic on hospital admission time.

Methods: The panic diagnosed patients in surgical pathology between January 2018 and January 2021 were determined. These patients' demographic, clinical, and critical diagnostic form data were documented. The duration of hospital admission of patients during and pre-COVID-19 pandemic period was determined.

Results: There were 65 panic diagnosed cases in surgical pathology, of which one patient had leukocytoclastic vasculitis, 10 patients had uterine contents without villi or trophoblasts, and 54 patients had unexpected malignancy. The mean time of admission to the hospital of verbally informed and not verbally informed cases were five days and 156 days, respectively, in the pre-COVID-19 group. All cases in the COVID-19 pandemic group were verbally informed about critical diagnosis and the mean time of admission to the hospital was 18 days (1–40). Admission times were on mean about 13 days longer in verbally informed cases in the COVID-19 pandemic group compared to verbally informed cases in the pre-COVID-19 group.

Conclusions: We determined a dramatic decrease in the number of panic diagnosed cases in surgical pathology during the COVID-19 pandemic and patients who are verbally informed admitted to the hospital in a shorter time. The integration of panic diagnosis notification systems to health applications and primary responsible family physician's systems may be useful for preventing unwanted delays.

Keywords: Panic Diagnosis, Unexpected Diagnosis, Significant Diagnosis, Critical Value.

COVID-19 Pandemi Dönemi ve Öncesinde Cerrahi Patolojide Panik Tanı alan Hastaların Hastaneye Başvuru Sürelerini Etkileyebilecek Faktörlerin Değerlendirilmesi

ÖZET

Amaç: Bu çalışmada cerrahi patolojide panik tanı alan hastaların hastaneye başvuru sürleri belirlenmiş, hastaneye başvuru süresini etkileyebilecek faktörler değerlendirilmiş ve COVID-19 pandemisinin hastaneye başvuru süresi üzerine etkisi irdelenmiştir.

Gereç ve Yöntem: 2018-2021 yılları Ocak ayları arasında cerrahi patolojide panik tanı alan hastalar belirlendi. Bu hastaların demografik, klinik ve panik tanı formlarındaki bilgiler derlendi. COVID-19 pandemi dönemi ve öncesindeki hastaneye başvuru süreleri belirlendi.

Bulgular: Cerrahi patolojide panik tanı alan 65 hasta mevcuttu. Bunlardan birinde lökositoklastik vaskülit, 10'nunda villus veya trofoblast içermeyen uterin küretaj materyali ve 54'ünde beklenmeyen tümör mevcuttu. COVID-19 öncesi dönemde panik tanı hakkında sözlü olarak bilgilendirilen ve bilgilendirilmeyen vakaların hastaneye başvuru süresinin ortalaması sırası ile, beş ve 156 gündü. COVID-19 pandemi döneminde tüm hastalar sözel olarak bilgilendirilmişti ve hastaneye başvuru süreleri ortalama 18 gündü. COVID-19 pandemi döneminde sözel olarak bilgilendirilen grubun hastaneye başvuru süreleri, pandemi öncesi döneme göre 13 gün daha uzundu.

Sonuç: COVID-19 pandemi döneminde panik tanı vakalarında belirgin düşüş ve sözlü olarak bilgilendirilen hastaların hastaneye daha kısa zamanda başvurduğunu saptadık. Hastane panik tanı bildirim sistemlerinin, sağlık aplikasyonlarına ve Aile hekimliği sistemine entegre edilmesi istenmeyen gecikmelerin önüne geçmek için yararlı olabilir.

Anahtar Kelimeler: Panik Tanı, Beklenmeyen Tanı, Önemli Tanı, Kritik Değer.

INTRODUCTION

Pathology reports are crucial medical documents that contain critical information about diagnosis, prognosis, and treatment. Although all pathology reports contain valuable information, some of them contain critical information about life-threatening changes that need immediate treatment (1). These diagnoses are considered panic diagnoses in surgical pathology (2). Failure to follow up on the results of these reports or lack of appropriate communication of these reports results may lead to a delay in diagnosis that may cause severe or irreparable harm and may affect the patient outcome (3). To ensure patient safety and prevent this delay, national pathology societies recommend that each pathology department should identify potential panic diagnosis lists and draw up a communication policy (2).

The College of American Pathologists (CAP) evaluates panic diagnoses in surgical pathology under Urgent Diagnoses and Significant, Unexpected Diagnoses titles. CAP defines urgent diagnoses as an important or life-threatening medical condition that requires urgent intervention and recommends that direct verbal communication occurs on the day of diagnosis. They also define Significant, Unexpected Diagnoses as a clinically unusual or unpredictable medical condition that needs to be addressed at some point in the patient's course and recommends that communication occurs as soon as possible (2). The Federation of Turkish pathology society considers Urgent, Significant, and unexpected diagnoses under a single title as a panic diagnosis.

Several studies indicated that immediately effective verbal communication had a beneficial impact on patient's outcome and treatment management (4, 5). Although communication between the clinician and pathologist is established in a brief time, in some cases, reaching the patient may take longer. In the case of patients with an unexpected malignancy, prolonged hospital admission time may result in delayed treatment and worsening of prognosis.

The severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2) that causes coronavirus disease 2019 (COVID-19), first appeared in Wuhan (China) and the COVID-19 pandemic spread rapidly around the world (6–8). The first case in Turkey was recorded on 11 March and following this many hospitals have been turned into the COVID-19 pandemic hospitals and elective surgical procedures and non-critical healthcare services are limited. The lockdown has also made it difficult for patients to access healthcare services for non-COVID-19 conditions in addition to healthcare limitations. Many studies revealed that hospital admission for acute medical illnesses, including stroke and acute myocardial infarction, fell dramatically with the onset of the COVID-19 pandemic (9–11).

In this study, we aimed to determine the duration of hospital admission of the panic diagnosed patient in surgical pathology pre-COVID-19 and during the COVID-19 pandemic, to examine the factors that may influence hospital admission time, and to identify the impact of the COVID-19 pandemic on hospital admission time.

MATERIAL AND METHODS

This study was conducted according to the Declaration of Helsinki's principles. The medical ethics committee (Approval No. 22.09.2020/09/09/01) approved this study. We evaluated the Erzincan Mengücek Gazi Training and Research Hospital (EMGTRH), Pathology Department records and determined the panic diagnosed patient in surgical pathology between January 2018 and January 2021. Patients who had inappropriate contact information in the hospital information processing system were excluded from the study. We reviewed patients' records and documented demographic, clinical, and panic diagnosis from data. We divided the cases into two groups according to the date of their panic diagnosis. Cases diagnosed before 11 Mach 2020 were included in the pre-COVID-19 group and the cases diagnosed after 11 Mach 2020 were included in the COVID-19 pandemic group.

We determined the date of admission to the hospital of the patients after receiving panic diagnosis notification through the hospital system and then compared notification and admission date to determine the patients' admission to the hospital time.

Patients were divided into two groups according to the median of the patient's admission time. The applicants within five business days after receiving notification were assigned to a fast group (FG), whereas the later application was considered as in the slow group (SG). We evaluated the variables (age, gender, the distance of the patient home to hospital, and verbal notification status) that we considered likely to affect the hospital admission time in these groups.

Statistical analysis was performed using SPSS version 15. Descriptive statistics were presented as mean and standard deviation, median, and distribution width. Comparison of continuous variables between groups was conducted using Student's t-test and Mann –Whitney U test according to their distribution. Also, a chi-square test was used for risk estimation. The confidence level for statistical significance was defined as 95 percent (α=0.05).

Panic diagnosis lists of our department that determined according to the national pathology societies recommend, were presented in Table 1.

Table 1. Panic diagnosis List of EMG TARH pathology department

Cases with immediate clinical consequences	Leukocytoclastic vasculitis Uterine contents without villi or trophoblast Fat in an endometrial curettage specimen Fat in colonic endoscopic polypectomy specimens
Unexpected or discrepant findings	Unexpected or discrepant findings Significant disagreement between frozen section and final diagnoses Significant disagreement between immediate interpretation and final FNA diagnosis Unexpected malignancy Significant disagreement and/or change between diagnoses of primary pathologist and outside pathologist consultation (at the original or consulting institution)
Infections	Bacteria or fungi in cerebrospinal fluid cytology in immunocompromised or immunocompetent patients Pneumocystis organisms, fungi, or viral cytopathic changes in bronchoalveolar lavage, bronchial washing, or brushing cytology specimens in immunocompromised or immunocompetent patients Acid-fast bacilli in immunocompromised or immunocompetent patients Fungi in FNA specimen of immunocompromised patients Bacteria in heart valve or bone marrow Herpes in Papanicolaou smears of near-term pregnant patients Any invasive organism in surgical pathology specimens of immunocompromised patients

RESULTS

There were 74 cases reported as a panic diagnosis in EMGTRH between January 2018–2021. Nine patients who had inappropriate contact information were excluded from this study. A total of 65 patients were included in this study (Figure 1).

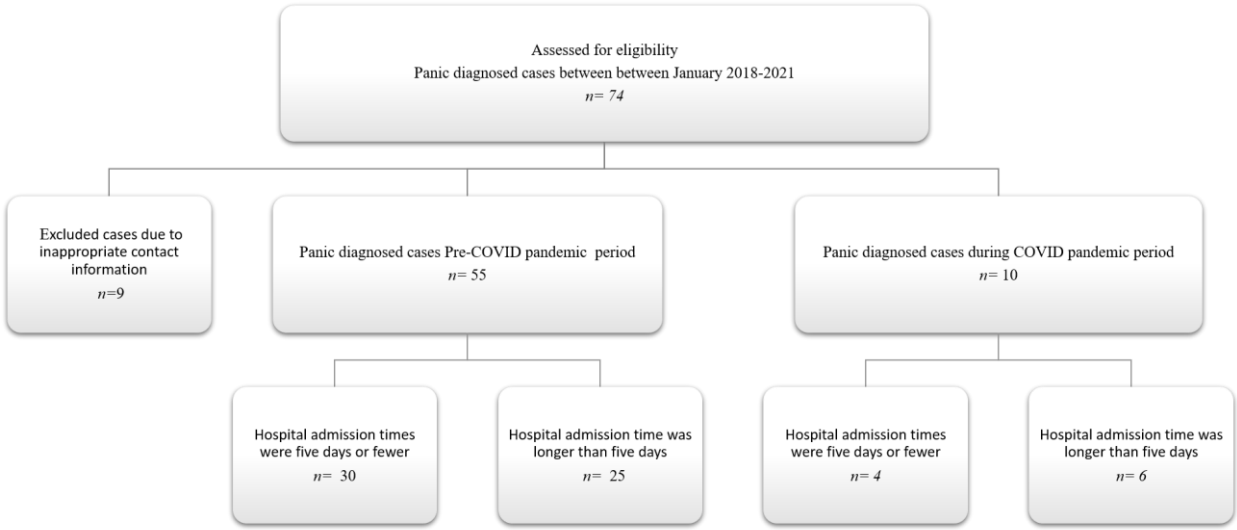

Figure 1. Flowchart demonstrating excluded cases and distribution of included cases according to hospital admission time.

The distribution of panic diagnosis of the 65 cases, demographic data, verbally notification status, and reaction time were presented in supplement data 1.

Of these 65 cases, 23 were males, and 42 were females; the median age was 52 years [range, 10–85]. One patient had leukocytoclastic vasculitis, 10 patients had uterine contents without villi or trophoblasts, and 54 patients had unexpected malignancy. The distribution of cases that had unexpected malignancy according to diagnosis was presented in Figures 2–3.

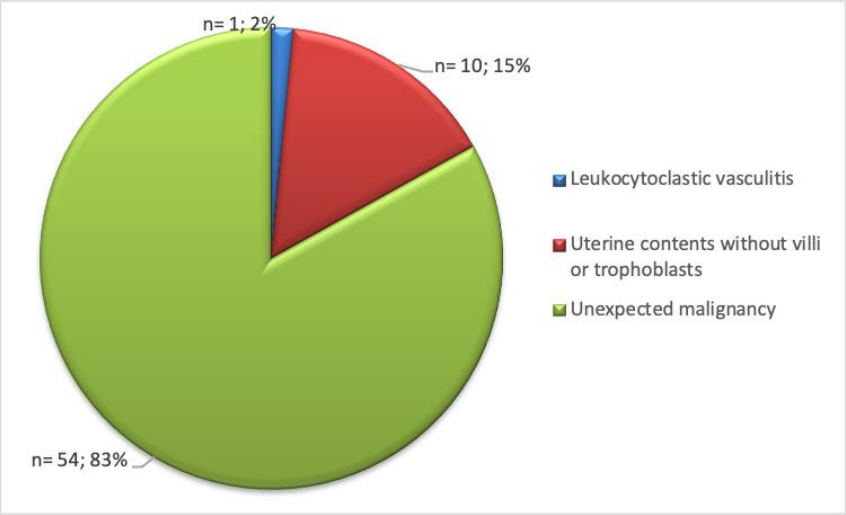

Figure 2.a. Distribution of cases according to causes of panic diagnosis

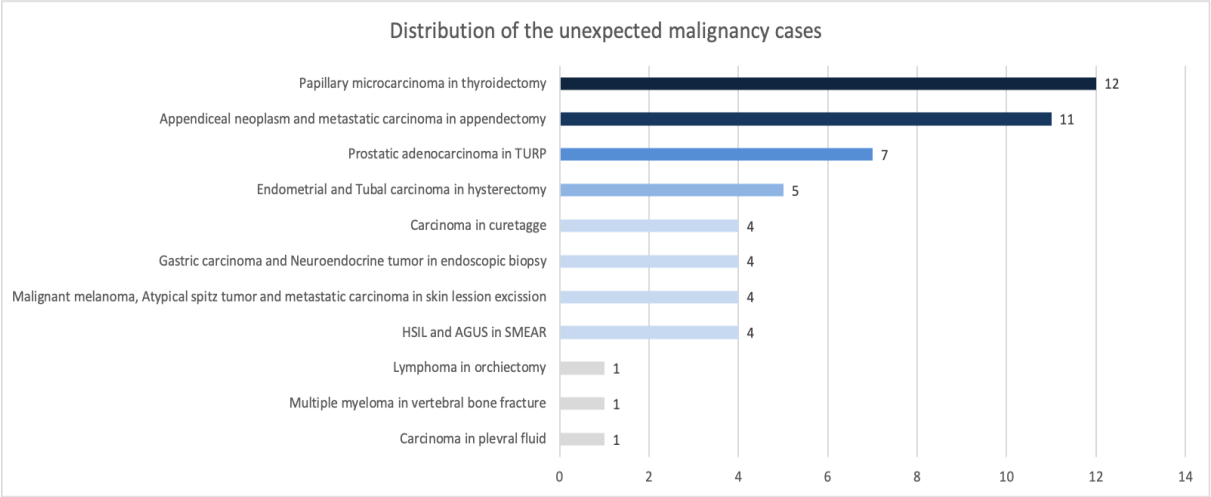

Figure 2.b. Distribution of cases with unexpected malignancy.

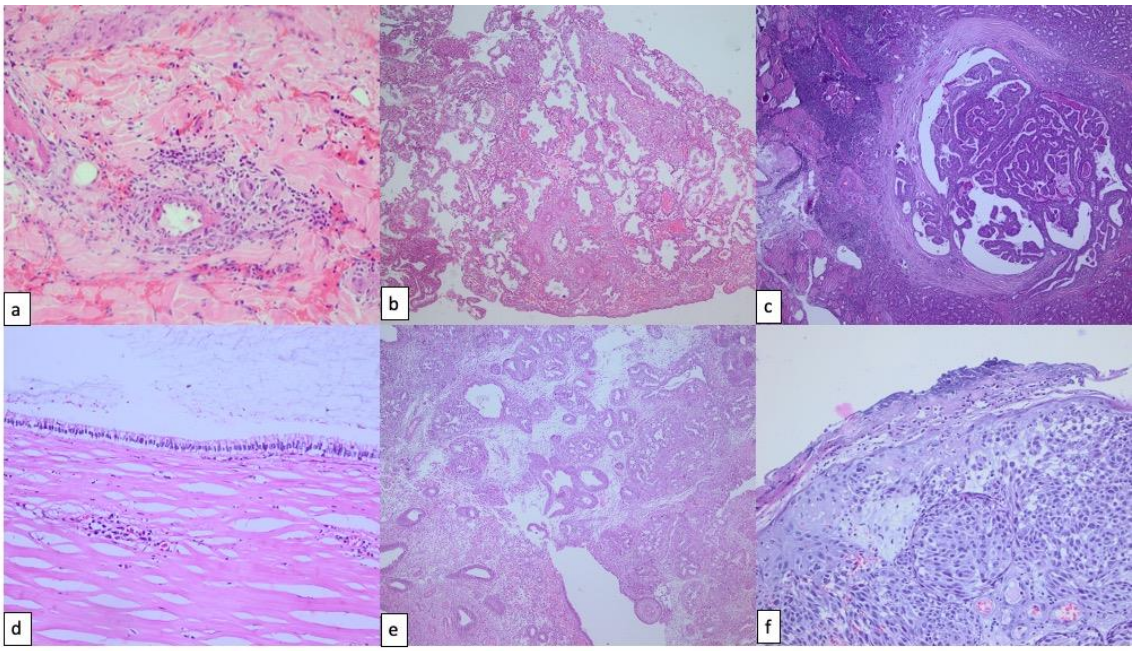

Figure 3. a; Leukocytoclastic vasculitis (H&E x100), b; Uterine contents without villi or trophoblasts (H&E x40), c; Papillary microcarcinoma (H&E x40), d; Low-grade mucinous neoplasm (H&E x200), e; Endometrial polyp and endometrial carcinoma (H&E x100), f; Malign melanoma (H&E

There were 55 cases in the pre-COVID-19 group. Thirty cases' hospital admission times were five days or fewer when cases were recruited into FG, and 25 cases' hospital admission time was longer than five days when cases were recruited into SG. The average length of admission to the hospital was 2.2 days in FG and was 99 days in SG (7–360). The average age was 47 years in FG and 59 years in SG. The average distance of the patient's living area to the hospital was 11 km (1–52) in the FG and 59 km in SG (4–390 km).

There was a statistically significant difference in the average distance of the patient's living area to the hospital, age, and notification status between FG and SG in the pre- COVID-19 group. There was no statistically significant difference in gender between FG and SG. The summary of distribution and statistical comparison of age and distance between patient home and hospital among FG and SG were presented in Table 2.

Table 2. The distribution and statistical comparison of age and distance between patient home and hospital among groups in pre- COVID period.

	Fast Admitted Group		Slow Admitted Group		
	Means ± SD	**Median (Min-Max)**	**Means ± SD**	**Median (Min-Max)**	**p**
Age	46.83±17.86	48.50 (10.00-79.00)	59±16.05	64.00 (23.00-85.00)	0.011[1]
The distance between patient home and hospital	10.03±13.02	5.00 (1.00-52.00)	59.36±80.4	55.00 (3.00-390.00)	<0.001[2]

SD: Standard deviation
[1] Student's t test, statistically significant at 0.95 confidence level
[2] Mann-Whitney U test, Statistically significant at 0.999 confidence level

Among pre-pandemic group cases, forty were verbally informed about panic diagnosis by phone call, 15 were not able to inform due to wrong phone number records. The mean time (day) of admission to the hospital of verbally informed and not verbally informed cases were five days and 156 days, respectively. Our results revealed that receiving verbal phone notification was significantly associated with patients' admission to the hospital time (Table 3). Admission times were on mean about 151 days longer in a patient in the not verbally informed cases compared to verbally informed cases in the pre- COVID-19 group.

Table 3. Chi-square test results between study groups in pre-COVID period, notification status, and gender

		FG	SG	p	OR (95%CI)
Gender	**Male/Female**	7/23	12/13	0.138*	0.431(0.140-1.326)
Notification Status	**Not Verbally informed /Verbally informed**	0/30	15/10	<0.001**	N/A

*not statistically significant (p>0.05)
**Statistically significant at 0.999 confidence level
OR: Odds ratio, FG: Fast admitted Group, SG: Slow Admitted Group

There were 10 cases in the COVID-19 pandemic group. Four cases of admission times were five days or fewer (1–5), and six cases admission time were longer than five days (16–40). We ascertained that four cases in the COVID-19 pandemic group were receiving treatment in the home due to COVID-19 infection at the time of diagnosis.

All cases in the COVID-19 pandemic group were verbally informed about panic diagnosis by phone call. The mean time (day) of admission to the hospital was 18.3 days (1–40). Admission times were on mean about 13.3 days longer in verbally informed cases in the COVID-19 pandemic group compared to verbally informed cases in the pre-COVID-19 group.

DISCUSSION

The concept of critical value in clinical pathology was first described by Lundberg in 1972 as "Pathophysiological derangements at such variance with normal as to be life-threatening if therapy is not instituted immediately." (12). The critical values in surgical pathology handled by Pereira et al. approximately thirty years from this, and they described possible surgical pathology critical value cases that need immediate communication (1). Over the years, the concept of critical diagnosis has been adopted by pathologists, and communication checklists have been added to the Laboratory Accreditation Programs by National Pathology Societies (2). National pathology societies recommend that each pathology department should identify potential panic diagnosis lists and draw up a communication policy (2).

Our panic diagnosis policy has been created according to the national pathology societies recommend; when a panic diagnosis is detected, verbal communication provides with the patient's responsible clinicians as soon as possible. The information of the clinicians and notification time are noted on the panic diagnosis form. When we

sign out a panic diagnosis, we indicate the patient as a panic diagnosed patient over the hospital information processing system (HIPS). Subsequently, the HIPS sends a notification message to the system and mobile phone of the responsible clinician. The HIPS also sends an information message to the patient's phone. We attach importance to informing the responsible clinicians as well as informing patients verbally about panic diagnosis. We only inform the patients about they had panic diagnosis and recommend that they should admit to the hospital as soon as possible. We don't give detailed information about diagnosis.

Most of the panic diagnosis cases were detected in materials sent from the surgical services department, and these clinicians devote most of their employment period to surgical procedures. If clinicians receive the panic diagnosis notification during surgical procedures, reaching a patient's contact information may take a long time. For this reason, we prefer to provide verbal information to the patient.

The annual average number of cases in our department was approximately 12000 and panic diagnosis cases accounted for approximately 0.25% of them. We recorded a significant decrease in the number of cases during the COVID-19 pandemic. Studies showed that panic diagnosis rates accounted for 0.5-20% of all cases (13, 14). This rate may differ according to the specific institutional factors, such as the bed capacity, organ transplantation unit, and case types. Informing patients verbally about the diagnosis can cause a serious increase in the daily workload in centers with a high panic diagnosis reporting rate.

Several studies indicated that well-timed effective verbal communication had a beneficial impact on patient's outcome and treatment management (5, 13). Staats et al. revealed that pathology laboratories had different approaches to time limitation, such as within 1-hour, same day, or no specific time frame, for communicating with the clinician (15). We do not have a strict time frame policy. Most of our cases had unexpected malignancy diagnosis and the information content is more important than the time of communication. Therefore, we provide communication between the clinicians and pathologists as soon as possible. Our findings showed that the duration of admission to the hospital of panic diagnosed patients in surgical pathology varied between 1 and 360 days. The prolonged admission time indicates that patients are not adequately informed about following up pathology reports, even if only indirectly.

The most important findings of our study were taking a phone notification has a beneficial impact on admission time. Admission times were on mean about 151 days longer in the patient in the not verbally informed group compared to the verbally informed group in the pre-COVID-19 period. We observed that even if the patients were verbally informed during the COVID-19 pandemic, they applied to the hospital for a longer period compared to the pre-pandemic period, five days, and 18.3 days, respectively.

We could not make a notification to fifteen patients since the contact information in HIPS belonged to different people or was not up to date. We believe that informing patients about the process of pathology reports and reminding them to keep their phone numbers in hospital records up to date to communicate in possible panic diagnosis situations may help shorten the admission time.

Many studies revealed that hospital admission for acute medical illnesses, including stroke and acute myocardial infarction, fell dramatically with the onset of the COVID-19 pandemic (9–11). The most reasonable explanation for patients' attitude is that the limitation of elective surgical procedures and non-critical healthcare services and quarantine procedure made it difficult for patients to access healthcare services for non-COVID-19 conditions or patients avoided seeking hospital care, perhaps in response to the fear of COVID-19 infection. The transportation of patients with COVID-19 to the hospital is provided only through the 112 Emergency Ambulance Service (EAS) in Turkey. EAS evaluates the patient's complaints related to infection and decides for the transportation of patients with COVID-19 to the hospital. Informing the EAS about the provision of transportation to the hospital in cases of COVID-19 positive panic diagnosed patients in surgical pathology may be effective in shortening the admission time.

In Turkey, doctors and patients can access health data collected from the health institution, regardless of where the examinations and treatments are held, via e-nabız that is an application developed by the Ministry of Health. Mobile phone applications such as e-nabız that provide communication between patients and the healthcare system, contribute positively to the country's healthcare system. In our country, primary care can also reach patients in a brief time via e-nabız. Therefore, we believe that sending automatic messages to family medicine units, which are primarily responsible for patients with applications such as e-nabız, can increase the chance of success in reaching the patient in cases of panic diagnosis. Our hospital has been integrated into this system in 2020. Due to the small sample size, the effect of this system on the application period cannot be evaluated clearly.

So far, a limited number of studies have been published on panic diagnosis. Most of the previous studies focused on the general recommendation of critical value policy, effective communication of critical diagnosis, or documentation of possible diagnostic list considered a critical diagnosis by pathologist or

clinician (13, 14, 16-20). To the best of our knowledge, this study is the first attempt at a comprehensive evaluation of factors that may affect the time of admission to the hospital who reaches a panic diagnosis. Our study has some limitations. This study has retrospective character in a single center and only provides information about the duration of hospital admission and trends of patients living around Erzincan. Therefore, our findings cannot be generalized to other population. Nevertheless, we believe that the findings of this study may be helpful to review the panic diagnosis communication policies of pathology laboratories. Further research with well-planned multi-centric studies in larger patient groups may be helpful to contribute to the development of panic diagnosis policy.

CONCLUSION

Several studies indicated that well-timed effective verbal communication had a beneficial impact on patient outcomes and treatment management. Our findings revealed that patients who were verbally informed about panic diagnosis were admitted to the hospital in a shorter time. Therefore, we believe that informing patients verbally should be included in panic diagnosis policies of surgical pathology, patients should be informed about the follow-up of the pathology report and their contact information should be kept up to date. Besides, integration of hospital panic diagnosis notification systems of the surgical pathology to health application and primary responsible family physician's systems may be useful for preventing unwanted delays.

Notes

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Supplement data-1. Demographic data, verbally notification status, admission to the hospital time and clinicopathological characteristic of the patients.

Panic Diagnosed Patients in Surgical Pathology, pre-COVID period

No	Gender	Age	Preliminary diagnosis	Procedure	Pathological diagnosis	Admission time	Study's group according to admission time	The distance between patient home and hospital	Verbally notification status
1	M	64	Vertebra fracture	Vertebral bone curettage	Multiple myeloma	2 days	FG	3 km	P
2	W	38	Multinodular goiter	Thyroidectomy	Papillary microcarcinoma	3 days	FG	4 km	P
3	M	78	Benign prostate hyperplasia	Transurethral resection	Prostatic adenocarcinoma	1 days	FG	5 km	P
4	W	60	Leukoclastic vasculitis	Punch biopsy	Leukoclastic vasculitis	1 days	FG	4 km	P
5	M	61	Pangastritis	Endoscopic biopsy	Adenocarcinoma	2 days	FG	2 km	P
6	W	44	Acute appendicitis	Appendectomy	Neuroendocrine neoplasm	4 days	FG	3 km	P
7	W	40	Menorrhagia, Polyp	Curettage	Squamous cell carcinoma	2 days	FG	5 km	P
8	W	52	Screen test	SMEAR	HSIL	2 days	FG	6 km	P
9	W	55	Menorrhagia, Polyp	Curettage	Endometrial carcinoma	1 days	FG	3 km	P
10	W	59	Myoma uteri	TAH+BSO	Serous carcinoma of tuba uterine	2 days	FG	2 km	P
11	W	79	Menorrhagia, Polyp	Curettage	Squamous cell carcinoma	1 days	FG	4 km	P
12	W	10	Pyogenic granuloma	Lesion excision	Atypical spitz tumor	2 days	FG	3 km	P
13	W	22	Suspicious of an ectopic pregnancy	Curettage	Uterine contents without villi	2 days	FG	4 km	P
14	W	25	Suspicious of an ectopic pregnancy	Curettage	Uterine contents without villi	2 days	FG	5 km	P
15	M	64	Benign prostate hyperplasia	Transurethral resection	Prostatic adenocarcinoma	5 days	FG	6 km	P
16	W	32	Suspicious of an ectopic pregnancy	Curettage	Uterine contents without villi	2 days	FG	2 km	P
17	W	28	Suspicious of an ectopic pregnancy	Curettage	Uterine contents without villi	3 days	FG	52 km	P

18	W	26	Suspicious of an ectopic pregnancy	Curettage	Uterine contents without villi	1 days	FG	10 km	P
19	W	30	Suspicious of an ectopic pregnancy	Curettage	Uterine contents without villi	1 days	FG	8 km	P
20	W	27	Suspicious of an ectopic pregnancy	Curettage	Uterine contents without villi	3 days	FG	43 km	P
21	W	29	Suspicious of an ectopic pregnancy	Curettage	Uterine contents without villi	4 days	FG	12 km	P
22	W	50	Multinodular goiter	Thyroidectomy	Papillary microcarcinoma	3 days	FG	39 km	P
23	W	42	Multinodular goiter	Thyroidectomy	Papillary microcarcinoma	2 days	FG	14 km	P
24	M	73	Multinodular goiter	Thyroidectomy	Papillary microcarcinoma	2 days	FG	8 km	P
25	W	66	Multinodular goiter	Thyroidectomy	Papillary microcarcinoma	3 days	FG	7 km	P
26	M	49	Multinodular goiter	Thyroidectomy	Papillary microcarcinoma	1 days	FG	6 km	P
27	W	54	Myoma uteri	TAH+BSO	Endometrial carcinoma	1 days	FG	1 km	P
28	W	48	Myoma uteri	TAH+BSO	Endometrial carcinoma	2 days	FG	5 km	P
29	M	62	Acute appendicitis	Appendectomy	Neuroendocrine neoplasm	2 days	FG	5 km	P
30	W	38	Acute appendicitis	Appendectomy	Low-grade mucinous neoplasm	4 days	FG	30 km	P
31	M	67	Lipoma	Lesion excision	Metastatic Squamous cell carcinoma	32 days	SG	4 km	N
32	W	81	Vaginitis	SMEAR	HSIL	360 days	SG	70 km	N
33	W	85	Pangastritis	Endoscopic biopsy	Adenocarcinoma	180 days	SG	12 km	N
34	M	61	Pangastritis	Endoscopic biopsy	Adenocarcinoma	20 days	SG	7 km	P
35	W	64	Myoma uteri	TAH+BSO	Squamous cell carcinoma	35 days	SG	95 km	N
36	W	41	Myoma uteri	TAH+BSO	Endometrial carcinoma	90 days	SG	62 km	N
37	W	65	Multinodular goiter	Thyroidectomy	Papillary microcarcinoma	8 days	SG	101 km	P

38	W	73	Pyogenic granuloma	Lesion excision	Malign Melanoma	7 days	SG	4 km	P
39	M	65	Benign prostate hyperplasia	Transurethral resection	Prostatic adenocarcinoma	18 days	SG	5 km	P
40	M	67	Benign prostate hyperplasia	Transurethral resection	Prostatic adenocarcinoma	60 days	SG	5 km	N
41	M	70	Benign prostate hyperplasia	Transurethral resection	Prostatic adenocarcinoma	20 days	SG	20 km	P
42	M	66	Benign prostate hyperplasia	Transurethral resection	Prostatic adenocarcinoma	110 days	SG	120 km	N
43	W	58	Multinodular goiter	Thyroidectomy	Papillary microcarcinoma	360 days	SG	390 km	N
44	W	43	Multinodular goiter	Thyroidectomy	Papillary microcarcinoma	7 days	SG	8 km	P
45	M	60	Pangastritis	Endoscopic biopsy	Neuroendocrine neoplasm	16 days	SG	7 km	P
46	W	69	Multinodular goiter	Thyroidectomy	Papillary microcarcinoma	360 days	SG	72 km	N
47	M	50	Pilonidal cyst	Lesion excision	Malign Melanoma	20 days	SG	76 km	N
48	W	56	Screen test	SMEAR	HSIL	90 days	SG	77 km	N
49	M	36	Acute appendicitis	Appendectomy	Low-grade mucinous neoplasm	8 days	SG	5 km	P
50	M	70	Acute appendicitis	Appendectomy	Metastatic Adenocarcinoma	10 days	SG	60 km	P
51	W	80	Acute appendicitis	Appendectomy	Low-grade mucinous neoplasm	191 days	SG	100 km	N
52	M	29	Acute appendicitis	Appendectomy	Low-grade mucinous neoplasm	112 days	SG	55 km	N
53	W	40	Acute appendicitis	Appendectomy	Low-grade mucinous neoplasm	320 days	SG	6 km	N
54	W	23	Acute appendicitis	Appendectomy	Neuroendocrine neoplasm	19 days	SG	3 km	N
55	M	56	Acute appendicitis	Appendectomy	Mucinous Adenocarcinoma	10 days	SG	120 km	P

Panic Diagnosed Patients in Surgical Pathology, during COVID pandemic

No	Gender	Age	Preliminary diagnosis	Procedure	Pathological diagnosis	Admission time	Study's group according to admission time	The distance between patient home and hospital	Verbally notification status	COVID infection
1	W	55	Multinodular goiter	Thyroidectomy	Papillary microcarcinoma	30 days	SG	2 km	P	COVID +
2	W	53	Vaginitis	SMEAR	Atypical glandular cells	16 days	SG	30 km	P	COVID +
3	W	29	Suspicious of an ectopic pregnancy	Curettage	Uterine contents without villi	3 days	FG	23 km	P	-
4	W	27	Suspicious of an ectopic pregnancy	Curettage	Uterine contents without villi	2 days	FG	19 km	P	-
5	M	71	Benign prostate hyperplasia	Transurethral resection	Prostatic adenocarcinoma	36 days	SG	45 km	P	COVID +
6	W	53	Menorrhagia, Polyp	Curettage	Squamous cell carcinoma	1 days	FG	60 km	P	-
7	M	45	Multinodular Goiter	Thyroidectomy	Papillary microcarcinoma	25 days	SG	12 km	P	-
8	W	40	Acute appendicitis	Appendectomy	Low-grade mucinous neoplasm	40 days	SG	14 km	P	COVID +
9	M	55	Viral pneumonia	Thoracentesis	Lung adenocarcinoma	5 days	FG	40 km	P	-
10	M	70	Orchitis	Orchiectomy	Lymphoma	25 days	SG	120 km	p	-

W: Woman; M; Man; TAH+BSO: Total abdominal hysterectomy with bilateral salpingo-oophorectomy; FG: Fast Group; SG: Slow Group; P: verbally informed; N: not verbally informed.