

# A Service Hospital? Advanced End Surgery Hospital?: One Month Temporary Assignment Experience

Hizmet Hastanesi Mi ? İleri Uç Cerrahi Hastanesi Mi ?:  
Bir Aylık Geçici Görevlendirme Deneyimi

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## Abstract

Objective	As a general surgeon who was assigned for a temporary period of time, we aimed to carry out the scientific analysis of the patients who were admitted and underwent surgery and received medical observation service during our one-month temporary service in the General Surgery Clinic of Hakkari State Hospital.
Materials and Methods	General surgery admissions evaluated by the emergency department and general surgery clinic in Hakkari State Hospital between 31 December 2017 - 31 January 2018 were retrospectively evaluated.
Results	Of the 521 patients admitted to the general surgery outpatient clinic directly as an outpatient or through the consultation request by the emergency department, 63.15% were the patients requiring emergency surgery and 44.73% were diagnosed with surgical acute abdomen. Two patients (5.26%) with an indication for surgery did not accept surgical treatment. On a patient presented with firearm injury, damage control surgery was performed for liver and colon injury. One patient who had intra-vehicle traffic accident was monitored in our hospital until transferred to an advanced center for observation and medical treatment due to grade I hepatic injury.
Conclusion	We are of the opinion that the presented data analysis of the simultaneous provision of surgical services to both catastrophic firearm injury cases and elective - emergency surgery cases for citizens during this mission, which involved the organization of advanced end surgical hospital, as well as the hospital providing healthcare services, will be a sample pilot study and will shed light in terms of the problems that inexperienced personnel to be assigned for such a mission may face with before the assignment and in terms of the case profile and being prepared for these.
Keywords	mobile surgery; hospital surgery department; Rural Hospitals

## Öz

Amaç	Geçici bir süre için görevlendirilen bir genel cerrahi uzmanı olarak Hakkari Devlet Hastanesi Genel Cerrahi Kliniğinde gerçekleştirdiğimiz bir aylık geçici hizmetimiz esnasında mürracaat eden cerrahi ve medikal gözlemlerle meticelenen olgularımızın bilimsel analizini gerçekleştirmeyi amaçladık.
Gereç ve Yöntemler	12 Aralık 2017 - 31 Ocak 2018 tarihleri arasında Hakkari Devlet Hastanesinde gerçekleşen acil servis ve genel cerrahi poliklinik servisi tarafından değerlendirilmeye alınan genel cerrahi başvuruları retrospektif olarak değerlendirilmiştir.
Bulgular	Genel cerrahi polikliniğine doğrudan ayakta veya acil servis üzerinden konsültasyon isteğiyle başvuran 521 hastanın (n) %63,15'i acil cerrahi müdahale gerektiren olgulardı. (n) %44,73'ü cerrahi akut batin tanısı aldı. Ameliyat endikasyonu olan 2 olgu (%5,26) cerrahi tedaviyi kabul etmedi. Ateşli silah yaralanması ile mürracaat eden bir olguda karaciğer ve kolon yaralanmasına yönelik hasar kontrol cerrahisi uygulandı. Araç içi trafik kazasına bağlı bir olgu grade I karaciğer yaralanması nedeniyle gözlem ve medikal tedavi amaçlı sevk edildiği ileri merkeze nakledilinceye kadar hastanemizde monitörize edildi.
Sonuç	Sağlık hizmeti verilen hastane olmak yanında ileri uç cerrahi hastane organizasyonunu da kapsayan bu görev esnasında hem katastrofik ateşli silah yaralanması olgularına hem de vatandaşlara yönelik elektif - acil cerrahi olgularına yönelik cerrahi hizmetin eş zamanlı olarak yürütülmesine ait sunduğumuz veri analizinin örnek bir pilot çalışma olacağını ve bu tip görevlendirmelere gidecek deneyimsiz personele görev öncesinde karşılaşılabileceği sorunlar ve bunlara hazırlıklı olması açısından vaka profili açısından ışık tutacağını değerlendirmekteyiz.
Anahtar Kelimeler	geçici cerrahi ; hastane cerrahi bölümü; kırsal hastaneler

### Introduction

Today, the healthcare issue stands out as an economic, sociological and political phenomenon. The primary goal of producing healthcare services is to ensure that the entire community is healthy. Moreover, health problems of a country also give clues about the level of development of that country.<sup>1,2</sup> The right to a healthy life is one of the most fundamental human rights and the use and protection of this right in our country is carried out within the limits of effective and efficient provision of healthcare services provided by the Ministry of Health and the private sector. In the face of the fact that the distribution of physicians present in our country is not equal between the regions and even among the provinces in the same region and this inequality is attempted to be solved by various regulations, practitioners and specialists are temporarily assigned to some provinces, when there is a need. With these assignments, it is envisaged not to cause any disruption in healthcare services, which is the most fundamental right of our citizens in the regions where healthcare services are needed, and to contribute to their treatments.

In our country, general surgery service is provided by training hospitals of state and foundation universities, public hospitals of the Ministry of Health, as well as private hospitals. General surgeons can serve in other hospitals with temporary assignments at different times like specialists of other branches. We did not find any literature of temporary assignment experience in the literature review. Therefore, in our study, we aimed to analyze the patients evaluated with surgery and medical observation during the one-month period of our service in Hakkari State Hospital as a general surgeon between December 12, 2017 and January 13, 2018. In the article, we wanted to refer to the provincial hospital on the border near the conflict zone with the term Advanced hospital.

### Materials and Methods

The population of Hakkari city center is around 81,000. Along with some settlements around the city center, the

population served by Hakkari State Hospital (HSH) has been reported to be around 95,000.<sup>3</sup> HSH has been serving in its new service building since 2008. The hospital with a capacity of 150 beds has four operating rooms and one tertiary (Level III) intensive care unit.

We analyzed the patients who underwent surgical interventions and received medical observation service within HSH during our one-month service between December 2017 and January 2018. Necessary permission was obtained from the hospital regarding the sharing of data. All patients who were directly admitted to the general surgery outpatient clinic or who were referred by the emergency department with the request of general surgery consultation were retrospectively evaluated.

The demographic data such as age, gender, and date and time of admission were classified. The patients' examinations, diagnoses and treatments were performed in the direction of medical anamnesis, physical examination and laboratory findings.

The reasons for admission of the patients admitted were classified. Accordingly, medical, emergency surgery or trauma-related surgical indication categories were determined. Type of trauma, armed conflict-related injury, emergency interventions, type of injury occurrence, distribution of injuries on the basis of geographical location, inpatient outcomes, resting information were recorded.

The patients' indications for surgery, type of anesthesia administered and type of surgery performed were analyzed. The data on postoperative morbidity, mortality and transfer to advanced hospitals were analyzed.

Statistical analysis of the data was carried out using SPSS 15.0 statistical software.  $p < 0.05$  value was considered statistically significant. Categorical variables are shown with numbers and percentages, continuous variables with mean and standard deviation.

For this study, approval was received from Hakkari State Hospital with a letter dated 27.02.2020 and number 90549914/663.03.

### Results

During the one-month study period, 456 patients were admitted to the general surgery outpatient clinic of Hakkari State Hospital. In addition, 54 patients were referred from the emergency department to the general surgery outpatient clinic for consultation. The mean age of the patients was  $50.7 \pm 9.7$  (age range: 18-91 years); of the patients, 87.9% were male and 12.09% were female. Of the patients requiring surgical intervention, 63.15% were the patients requiring emergency surgical intervention and 44.73% were diagnosed with surgical acute abdomen. The patients' indications for surgery and types of surgery were presented in Table 1. Two patients (5.26%) with an indication for surgery did not accept surgical treatment. On a patient presented with firearm injury, damage control surgery was performed for liver and colon injury. One patient who had intra-vehicle traffic accident was monitored in our hospital until transferred to an advanced center for observation and medical treatment due to grade I hepatic injury. Fifteen patients underwent elective surgery. Two of these patients were operated with the diagnosis of cholelithiasis. However, two patients, who had an indication for surgery due to gastric perforation and ileus, voluntarily refused to undergo surgery. None of the patients developed postoperative complication.

**Table 1a: Analysis of surgical interventions performed during temporary assignment**

			Anesthesia Type		Number of Patients	Emergency(E)/ Outpatient Clinic (O)	Female	Male
	Rectovaginal laceration	Primary repair	Local Anesthesia	Recovery	1	E	1	0
Acute Abdomen								
	Epiplonic appendicitis	Epiplonic appendicitis (Radiological Diagnosis)		Medical treatment + Recovery	1	E	0	1
	Acute appendicitis	Appendectomy	General Anesthesia	Recovery	8	E	2	6
	Perforated acute appendicitis	Appendectomy + Drainage	General Anesthesia	Recovery	6	E	1	5
	Gastric perforation	Antrum Primary suture	General Anesthesia	Recovery	1	E	0	1
	Gastric Perforation?			Refusal of Treatment	1	E	0	1
HPB*	Acute Calculous Cholecystitis	Open cholecystectomy	General Anesthesia	Recovery	1	E	1	0
		Laparoscopic cholecystectomy	General Anesthesia	Recovery	1	E	1	0
	Cholelithiasis	Laparoscopic cholecystectomy	General Anesthesia		1	O	0	1
	Choledocholithiasis			Safely referral for further treatment	1	E	1	0
Hernia								
	Inguinal hernia	Inguinal herniorrhaphy + mesh	Spinal Anesthesia	Recovery	3	O	0	3
	Recurrent inguinal hernia	Inguinal herniorrhaphy + mesh	Spinal Anesthesia	Recovery	1	O	0	1
	Irreducible inguinal hernia	Manual reduction		Recovery	1	E	0	1
Firearm injury								
	Fragmentation	Exploratory laparotomy Liver segment 6 resection Segmental resection of the right colon Bleeding control End colostomy	General Anesthesia	Safely referral for further treatment	1	E	0	1
leus	Ileus + Mass in the descending colon?			Safely referral for further treatment	1	E	1	0
Traffic Accident								
	Intra-vehicle	Grade I Injury at Liver segments 5-8		Referral for further monitoring	1	E	1	0
	Recurrent pilonidal sinus	Excision + Primary suture	Spinal Anesthesia	Recovery	1	O		1
	Pilonidal sinus	Excision + Primary suture	Spinal Anesthesia	Recovery	3	O	1	2
	Pilonidal abscess	Drainage	Local Anesthesia	Recovery	2	O	1	1

**Table.1b Analysis of surgical interventions performed during temporary assignment**

			Anesthesia Type		Number of Patients	Emergency(E)/ Outpatient Clinic (O)	Female	Male
<b>Lipoma</b>								
	Multiple Lipomas in the Scalp	Lipoma excision	Local Anesthesia	Recovery	2	O	1	1
	Left subcapular mass	Mass excision	Local Anesthesia	Recovery	1	O		1
	Left lumbar subcutaneous mass	Lipoma excision	Local Anesthesia	Recovery	1	O		1
<b>Abscess</b>								
	Subcutaneous extremity abscess	Abscess drainage	Local Anesthesia	Recovery	1	O		1
<b>Anal Region</b>								
	External hemorrhoid	Medical Treatment		Recovery	34	O	11	23
	Internal hemorrhoid	Medical Treatment		Recovery	5	O	1	4
	E. Thrombosed Hemorrhoid	Thrombectomy	Local Anesthesia	Recovery	3	O		3
	Anal Fissure	Medical Treatment		Recovery	26	O	16	10
<b>Peripheral Venous Insufficiency</b>								
	Varicose veins of lower extremities	Medical Treatment		Recovery	13	O	8	5
<b>GI Diseases</b>								
	GERD**	Medical Treatment		Recovery	18	O	7	11
	Gastritis	Medical Treatment		Recovery	32	O	13	19
	IBS***	Medical Treatment		Recovery	14	O	9	5
	Non-specific Abdominal Pain	Medical Treatment		Recovery	9	O	7	2
<b>Thyroiditis</b>								
	Nodular Goitre	Medical Treatment			15	O	8	7
	Thyroid Cancer			Referral for further treatment	2	O	1	1
<b>Breast</b>								
	Breast Mass	Monitoring			19	O	19	0
	Mastitis	Medical Treatment		Recovery	7	O	7	0
	Breast Cancer			Referral for further treatment	2	O	2	0
*:HPB: Hepato pancreato biliary **: GERD:Gastroesophageal Reflux Disease ***IBS: Irritable bowel syndrome								

### Discussion

Physicians are of special importance in maintaining and improving the health statuses of individuals who make up the community. Surgeons who have to taken on responsibility of the patient, provide diagnosis, treatment and care to severely ill and fatal patients, as well as provide emotional support to the patients and their relatives in most cases are among the occupational groups that have an intensive workload, surgical labor is the hardest type of medical labor.<sup>4</sup>

It is a known fact that many general surgeons in our country are working under non-optimal and mostly inadequate conditions in terms of colleagues, allied health personnel and medical/surgical facilities. Another general determination is that the majority of general surgeons in our country work with dedication and usually longer than legal working hours, despite these unfavorable conditions. It has been observed that there are some difficulties of being a single doctor of the branch in the assigned province compared to serving as a second or third doctor. The most important of these was the absence of a colleague to consult with and receive an additional opinion regarding his own branch.

As in many countries, general surgeons are densely populated in large cities in our country, and the resulting distribution inequality is also present in our country. This inequality is attempted to be solved by various regulations, and as in our assignment, practitioners and specialists are temporarily assigned to some provinces, when there is a need. Although the number of surgeons that should be allocated to certain population has been reported as 1/25,000 in the international literature, this rate is 1.27 in our country. There is a 27% excess in total according to the standard.<sup>5</sup> However, in the period between December 2017 and January 2018 when served as a general surgeon with temporary assignment, it was worked as the only general surgeon in Hakkari province including the surrounding districts and the rate of general surgeon per capita was determined as 1/95.000, which was under the interna-

tional standards.

One of the major problems encountered during the process of surgical intervention is the lack of identifying surgical hand tools and devices used and the inadequate knowledge of surgical team, which in turn leads to the prolongation of surgical intervention and increased stress of the surgical team. Therefore, the role of surgical materials in the success of surgical intervention is inarguable. One of the most important problems we also faced was the technical difficulties experienced by the surgeon because of the absence materials that he got used to and use or the presence of different materials.<sup>6</sup>

Social living conditions, geographical region, climate and lifestyle have a determinative effect on diseases. Therefore, the need for healthcare services in each region also varies.<sup>7,8</sup> Factors such as cultural differences of different populations, tolerance to symptoms, and patients' acceptance of surgical risk affect the rate of surgical interventions. Despite the regional differences, the average number of operations per general surgeon per year is 255 in our country.<sup>5</sup> Between December 2017 and January 2018, a total of 38 surgeries, elective and emergency, were performed in Hakkari State Hospital where we worked as a single surgeon, which is above the national average. However, two patients, who had an indication for surgery due to gastric perforation and ileus, voluntarily refused to undergo surgery.

The time required to be allocated to a patient by physicians is not a new topic in the medical literature. It has been shown that increasing the time allocated to the patient even by 1 minute leads to improvements in many issues from increased diagnostic accuracy to decreased error percentage.<sup>9-12</sup> In 2017 (January-October) period, Hakkari State Hospital ranked 44th among the top 100 hospitals with the highest emergency department examination rate.<sup>13</sup> Between December 2017 and January 2018, outpatient clinic service was provided to a total of 670 patients,

including 124 patients who had emergency consultation examination.

The number of penetrating injuries has been increasing with increasing violence nowadays. Since the hospital is located in a region where terrorism activities take place, especially firearm injuries are more common. In firearm injuries, firearms are divided into 3 different groups as light, medium and high energy depending on their destructive energy. Almost all of the firearm injuries observed in this region were caused by high-energy weapons and their effect on the tissue is more destructive than light-energy weapons. And this led us to encounter unusual firearm injuries compared to firearm injuries observed in other regions.<sup>14-16</sup>

We are of the opinion that the presented data analysis of the simultaneous provision of surgical services to both catastrophic firearm injury cases and elective - emergency surgery cases for citizens during this mission, which involved the organization of advanced end surgical hospital, as well as the hospital providing healthcare services to the citizens, will be a sample pilot study and will shed light on in terms of the problems that inexperienced personnel to be assigned for such a mission may face with before the assignment and in terms of the case profile and being prepared for these.

#### **Competing interests**

The authors declare that they have no competing interests and any sources of funding for our publication.

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