Chest Diseases in Refugees Living in a Tent Camp and in Turkish Citizens Living in the District: Ceylanpınar Experience

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Cite this article as: Kurtuluş Ş, Sak ZHA, Can R. Chest Diseases in Refugees Living in a Tent Camp and in Turkish Citizens Living in the District: Ceylanpınar Experience. Turk Thorac J 2018; 19(3): 117-21.

Abstract

OBJECTIVES: Displacement, for whatever reason, is an urgent situation that affects both the migrant and the migratory society in a holistic manner, and that especially hurts Middle Eastern societies. Studies show that health problems experienced as a result of immigration are important in terms of cost reduction and quality of life. This study aimed to investigate chest diseases (CD) among refugees living in a tent camp and Turkish citizens living in the district Şanlıurfa Ceylanpınar which is located in the South East of the Turkey.

MATERIALS AND METHODS: A retrospective registry-scan type study was performed between January 2015 and December 2015. The extent of this study is the citizens of Turkish Republic and refugees who applied to Şanlıurfa Ceylanpınar State Hospital CD Polyclinic and Annex Building CD Polyclinic and Emergency Polyclinic. The study has been divided into two groups as Refugees and Turkish citizens, the data of patients who were referred to the Chest Diseases Polyclinic and Emergency Polyclinic for chest complaints were recorded. The diagnoses of chest diseases in both groups were compared. Patients who presented with a chest complaint but did not have any diagnosis were sent for further psychiatric evaluation with regard to anxiety. Tuberculosis, which is an important public health problem, was also studied in detail.

RESULTS: In total; 455,882 patients were admitted to the Şanlıurfa Ceylanpınar State Hospital center and Annex Building Chest Diseases Polyclinic and Emergency Polyclinic with chest complaints. Pneumonia, asthma, and chronic obstructive pulmonary disease were found to occur more frequently in refugees from the tent camp than in Turkish citizens. Anxiety was higher among Turkish Citizens in patients who had a chest complaint but did not receive any diagnosis.

CONCLUSION: Refugees living in tent camps and Turkish citizens living in the same area were found to have similar results in terms of respiratory diseases, including tuberculosis. Physiological and psychological effects of war were expected to be high in refugees because they were affected by immigration; however, they were no different than the physiological and psychological effects noted in local people. These data suggest that the local people as well as current immigrants may be psychologically affected.

KEYWORDS: Migration, Syrian refugees, diagnosis rates, anxiety, tuberculosis

Received: 30.08.2017

Accepted: 02.01.2018

Available Online Date: 12.06.2018

INTRODUCTION

In recent years, the number of refugees has dramatically increased all over the world as a result of migration caused by wars. In fact, according to data by the United Nations, it is expected that the number of international immigrants in the world will reach 405 million by 2050, if migration continues to increase as rapidly as it has over the last 20 years [1].

The ongoing war in Syria over the last six years has caused 4 million people to emigrate. Turkey, being the neighboring nation, has opened its doors to immigrants owing to its geographical location and hosts the world's largest refugee population, holding the first place among the most affected countries. Refugees who live in both in camps and in cities owing to refugee overburden have been taken under temporary protection by the Turkish Republic. In this context, health services, just as other services, are provided free of cost [2]. Despite the services offered, the fact that immigrants leave their homes, territories, and countries and settle in new places causes them to experience difficulties in adjustment [3]. However, challenging transportation to health institutions, poor nutrition, poor living conditions, language problems, low level of education, economic inadequacy, and lack of social security have negative effects on health [4]. Contagious diseases, vaccine preventable diseases (measles, tuberculosis, hepatitis, etc.), and psychiatric problems such as depression, anxiety disorders, burnout, sleep disorders, prolonged mourning, and post-traumatic stress disorder, play an important role among the health problems that are experienced by refugees [5,6]. Poor living conditions of asylum seekers cause unavailability of basic health needs. Moreover,

This study was presented in Turkish Thoracic Society 19th Annual Congress, April 06-10, 2016, Antalya, Turkey

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the threat of epidemic diseases increases, which poses a threat to the health of the local people. In addition, emerging health problems create a great pressure on the sector, and this causes the needs, demands, and costs to increase, and consequently, the number of personnel and institutions become insufficient [7]. For example, it was found that Syrian refugees resulted in an additional cost of 10% to the health sector in Jordan, and these services, which were provided free of cost, also increased workload in the healthcare sector and decreased the quality of services [8]. In Turkey, it is known that 953,466 operations were performed within the scope of the treatment of Syrian and Iraqi asylum seekers until the end of May 2017, and 1,143,393 inpatient services and 25,919,750 ambulatory care services were provided to them [9].

The aim of this study was to compare refugees living in tent camps and Turkish citizens living in the city, in terms of chest diseases.

MATERIALS AND METHODS

Ceylanpınar is a district in Şanlıurfa on Syrian border. The population of the town, which is 140 km away from the City Center, was 84,727 in the year 2015 [10]. The tent camp is 13 km away from Ceylanpınar. Refugees living in tent camps generally come from the Syrian cities of Idlip, Aleppo, and Haseke in general. There are fewer refugees from other parts of Syria and from countries such as Iraq and Palestine [2].

The Şanlıurfa Ceylanpınar State Hospital where the study was planned comprises two units viz., the Central Building and the Annex Building. The Central Building is located in district, and the Annex Building is located in the tent camp area. Health services at both the units are provided by the staff of Şanlıurfa Ceylanpınar State Hospital.

This is a retrospective registry-scan study executed between January 1, 2015, and December 31, 2015, including Turkish citizens who applied to the Central Building of Şanlıurfa Ceylanpınar State Hospital Chest Diseases and Emergency Polyclinic with chest complaints and refugees who applied to the Department of Chest Diseases and Emergency Polyclinic of the Annex Building with chest complaints.

In the scope of the study, the diagnoses of the patients with chest complaints, who applied to both the Department of Chest Diseases and the emergency polyclinic, were recorded by querying the Hospital Information Management System. The diagnoses for chest diseases of both the groups were compared. The patients who applied with a chest complaint but did not receive any diagnosis, were consulted by the psychiatric in terms of anxiety. Tuberculosis, an important public health problem, was studied in detail.

The required approval was received from the Ethics Committee for non-interventional research at Harran University School of Medicine.

RESULTS

In total, 455,882 patients applied to the Department of Chest Diseases and Emergency Polyclinic in the Central Building and Annex Building of Şanlıurfa Ceylanpınar State Hospital (Table 1).

In total, 19,682 Turkish citizens applied to the Central Building Chest Diseases Polyclinic. Chest pain (16%) was the most common chest symptom among Turkish citizens who applied to the Central Building Chest Diseases Polyclinic. The five most common diagnoses were asthma (13.5%), chronic obstructive pulmonary disease (COPD) (9%), acute bronchitis (9%), pneumonia (6.7%), and seasonal allergic rhinitis (4%).

In total, 245,166 Turkish citizens applied to the Central Building Emergency Polyclinic. The most common chest symptom among Turkish citizens who applied to the Central Building Emergency Polyclinic was chest pain with a rate of 1.5%, and the most common three diagnoses were acute upper respiratory tract infections (30.9%), myalgia (2.5%), and acute bronchitis (1.4%) (Table 1).

In total, 2,374 Syrian refugees applied to the Annex Building Chest Diseases Polyclinic. Chest pain was the most common chest symptom with a rate of 11.5% among Syrian refugees who applied to the Annex Building Chest Diseases Polyclinic. The five most common diagnoses were asthma (18.7%), pneumonia (14.5%), COPD (10.6%), acute bronchitis (6.9%), and seasonal allergic rhinitis (2.4%).

In total, 188,660 refugees applied to the Annex Building Emergency Polyclinic. Chest pain (0.4%) was the most frequent chest symptom among refugees who applied to the Annex Building Emergency Service polyclinic. The three most common diagnoses were acute upper respiratory tract infections (28.7%), myalgia (6.3%), and acute bronchitis (2.6%) (Table 1).

The number of patients who applied to the Chest Diseases and Emergency Polyclinic with chest complaints in both units, but did not receive any diagnosis and whose anxiety was confirmed by the Psychiatric Department, was 1,958 (Table 2).

While the rate of anxiety was 1.6% for Turkish citizens that applied to the Central Building Chest Diseases Polyclinic, it was 0.49% for those that applied to the Central Building Emergency Polyclinic (Table 2).

While the rate of anxiety was 1.5% for refugees that applied to the Annex Building Chest Diseases Polyclinic, it was 0.20% for those that applied to the Annex Building Emergency Polyclinic (Table 2).

Regarding tuberculosis, which is an important public health problem, three refugees living in a tent camp were diagnosed with Sputum ARB (+) pulmonary tuberculosis. Five of the Turkish citizens were diagnosed with pulmonary tuberculosis and five with non-pulmonary tuberculosis (Table 1). Two of the five were ARB (+) and the remaining were ARB (-). Two ARB (-) cases were diagnosed with tuberculosis via culture test and one via clinical-radiological method. Pulmonary tuberculosis patients were isolated during the infection period, and those who had come in contact with the people who are exposed to infection of the patients who has pulmonary tuberculosis were screened through clinical and radiological evaluation and a PPD test. Throughout 2015, the PPD test was performed in a total of 318 people.

Table 1. Diagnostic distributions of the patients who applied to the Şanlıurfa Ceylanpınar State Hospital central building and the annex building in the tent camp

Diagnosis	Total Applications	Turkish Citizens who Applied to the Chest Diseases Polyclinic in the Central Building	Turkish Citizens who Applied to the Emergency Polyclinic in the Central Building	Syrian Refugees who Applied to the Chest Diseases Polyclinic in the Annex Building	Syrian Refugees who Applied to the Emergency Polyclinic in the Annex Building
Asthma	6.960	2.665 (13.5)	2.535 (1.0)	443 (18.7)	1.317 (0.7)
Pneumonia	2.261	1.323 (6.7)	359 (0.1)	345 (14.5)	234 (0.1)
Chronic obstructive pulmonary disease	3.498	1.769 (9.0)	966 (0.4)	252 (10.6)	511 (0.3)
Tuberculosis	13	10 (0.1)	0 (0.0)	3 (0.1)	0 (0.0)
Acute bronchitis	10.367	1.773 (9.0)	3.434 (1.4)	164 (6.9)	4.996 (2.6)
Seasonal allergic rhinitis	1.589	782 (4.0)	87 (0.0)	58 (2.4)	662 (0.4)
Pneumothorax	53	5 (0.0)	18 (0.0)	20 (0.8)	10 (0.0)
Pleural effusion	55	44 (0.2)	0 (0.0)	8 (0.3)	3 (0.0)
Bronchiectasis	138	128 (0.7)	3 (0.0)	7 (0.3)	0 (0.0)
Pulmonary embolism	54	37 (0.2)	5 (0.0)	9 (0.4)	3 (0.0)
Varicose veins, deep vein thrombosis	33	10 (0.1)	15 (0.0)	6 (0.3)	2 (0.0)
Interstitial lung disease	20	19 (0.1)	0 (0.0)	1 (0.0)	0 (0.0)
Malignant neoplasm of the bronchus and lung	17	11 (0.1)	0 (0.0)	4 (0.2)	2 (0.0)
Sleep apnea	29	26 (0.1)	0 (0.0)	3 (0.1)	0 (0.0)
Congenital malformation of ribs	18	7 (0.1)	6 (0.0)	3 (0.1)	2 (0.0)
Fractures of ribs, sternum, and thoracic spine	31	6 (0.0)	13 (0.0)	7 (0.3)	5 (0.0)
Acute sinusitis	3.950	1.755 (8.9)	727 (0.3)	143 (6.0)	1.325 (0.7)
Acute upper respiratory tract infection	130.558	549 (2.8)	75.723 (30.9)	65 (2.7)	54.221 (28.7)
Chronic respiratory failure	64	18 (0.1)	45 (0.0)	1 (0.0)	0 (0.0)
Myalgia	18.453	403 (2.0)	6.113 (2.5)	49 (2.1)	11.888 (6.3)
Others	277.721	8.342 (42.3)	155.117 (63.2)	783 (32.9)	113.479 (60.1)
Total Applications	455.882	19.682	245.166	2.374	188.660

Table 2. Anxiety distribution in patients who applied to the chest diseases and emergency polyclinics

Application Qualification	Total (%)	Male (%)	Female (%)
Turkish citizens that applied to the Chest Diseases Polyclinic in the Central Building	313 (1.6)	74 (0.4)	239 (1.2)
Turkish citizens that applied to the Emergency Polyclinic in the Central Building	1,225 (0.49)	362 (0.14)	863 (0.35)
Syrian refugees that applied to the Chest Diseases Polyclinic in the Annex Building	35 (1.5)	10 (0.4)	25 (1.1)
Syrian refugees that applied to the Emergency Polyclinic in the Annex Building	385 (0.20)	162 (0.08)	223 (0.12)
Total	1.958	608	1.350

DISCUSSION

In this study, the total number of applicants to the Department of Chest Diseases and Emergency Polyclinic of Şanlıurfa Ceylanpınar State Hospital Central Building and Annex Building was 455,882, and while the top five diagnoses among Turkish citizens were asthma (13.5%), COPD (9%), acute bronchitis (9%), pneumonia (6.7%), and seasonal allergic rhinitis (4%), those among Syrian refugees were asthma (18.7%), pneumonia (14.5%), COPD (10.6%), acute bronchitis (6.9%), and seasonal allergic rhinitis (2.4%). While the

number of tuberculosis cases among Turkish citizens and refugees was 10 and 3, respectively, the rates of anxiety rates were found to be 1.6% and 1.5%, respectively.

Displacement of people in the Middle East is an urban phenomenon. While some of the displaced people live in camps, the majority remain concealed within the host country population in poor residential areas and without legal status [11].

Displacement, in other words, immigration, is one of the urgent human conditions of modern times. In addition to trau-

matic events that may result in migration, illness, or death, lack of shelter, loss of living sources, poor nutrition, inadequate hygiene, language problems, and inadequate access to health services lead to increased health problems, especially among individuals who experience forced migration [11,12]. One of these health problems is respiratory diseases [13,14]. Lung diseases, known as the cause of one in six deaths around the world, are one of the world's most serious health problems because they decrease quality of life, increase the cost of care, and decrease productivity [15,16].

The data obtained from our study show that the rates of pneumonia, asthma, and COPD among refugees living in tent camps are higher than those among Turkish citizens (Table 1). In a field research in which chronic diseases were also examined among Syrian refugees using a questionnaire, it was reported that 7% of asylum seekers living in camps and 8% of the asylum seekers living outside camps had chronic diseases [17]. In our study, the rate of chronic bronchitis (COPD) among other chronic diseases was found to be 10.6% for refugees and 9% for Turkish citizens, which is remarkably high. The literature is insufficient in terms of the diagnosis that enables the comparison of the results obtained from our study. However, some studies with different methodologies show that respiratory diseases are a frequent problem in migrating communities and in immigrant-receiving communities [13,14,18].

Psychological and physical violence during the pre-migration period, genocide, witnessing the injury and death of relatives, destruction, plunder, child abduction, financial impossibilities, and trauma are circumstances that increase the risk of mental diseases. Moreover, legal barriers such as homelessness, anxiety about the future, and linguistic and cultural impediments pose a risk in terms of psychological problems that may also occur after migration [19]. Lebanon's first large-scale psychiatric epidemiological study, which is a part of the Global Mental Health Research Initiative of the World Health Organization (WHO), has surprisingly shown that 49% of the population has experienced some sort of war-related trauma [20]. According to the study by Husain et al. [21], which was conducted in Sri Lanka during the post-war period, rate of anxiety was found to be 32.6%; in addition, post-war post-traumatic stress syndrome, anxiety, and depression levels were also measured. In our study, the rate of anxiety was 1.7% among refugees. The results was obtained are lower than those in the literature, which can be explain by the inclusion of only the patients who applied to the Chest Diseases and Emergency Polyclinics. However, the rate of 1.7% is still remarkable for war-aggrieved patients. Even if our finding is lower than the study in the literature, it is enough to show that the refugees effects from the war [22,23]. The results obtained in our study show that the Turkish citizens that witness war and live in district close to the national border are also affected by war. This influence is higher than in the refugees coming from a war environment. In fact, the rate of anxiety detected among Turkish citizens was 2.09%. In both groups, anxiety was found to be more frequent in women than in men. Based on our subjective observations, this can be explained by the fact that, in terms of protecting and maintaining the family, women are more sen-

sitive toward, migration, and the problems that accompany these circumstances. Anxiety levels were examined in a field research via questionnaire involving Syrian refugees in 2013, and anxiety was reported to be more frequent in women than in men [17]. This result is similar to our study.

According to World Health Organization (WHO) estimates, in 2015, 10.4 million new cases of tuberculosis were noted, and 1.8 million people lost their lives because of the disease. Although the number of new cases indicates that the incidence of tuberculosis decreases by 1.5% per year, it remains an important public health problem [24,25].

Societies experiencing migration are faced with several infectious diseases because they enter a new environment as well as they often live under bad conditions. The destruction of health facilities and the difficulties in disease management because of the lack of medical personnel and due to increased need for drugs due to illness, and living outside the camp and indifferent refugees cannot get free drugs as inability to achieve drugs, in the countries where they come from, and the physical, social, and psychological adaptation process in newly arrived societies are some of the main reasons of the emerging health problems. One of these health problems is tuberculosis, which is an important public health problem [24,26].

As per the 2012 WHO Global Tuberculosis Report, Syria's goal for the prevention of tuberculosis was to decrease the prevalence of tuberculosis from 85/100,000 in 1990 to 23/100,000 in 2011 [27]. As a matter of fact, in the 2014 tuberculosis report, it was seen that the rate decreased to 17/100,000. However, the increase in conflicts in Syria has adversely affected diagnosis and treatment initiatives for tuberculosis in every area. The prevalence of tuberculosis in Syria was found to be 20/100,000 according to the data from the Global Tuberculosis Report in 2016. According to the same report, the prevalence of tuberculosis in Turkey is 18/100,000 [24].

The prevalence of tuberculosis was found to be 18.7/100,000 in screening studies conducted on refugees in our country. This rate is the same as the prevalence in the Turkish society [28]. In our study, while the number of cases that was detected in Syrian refugees living in tent camps with a population of 19,948 [29] was three, this number was 10 in Turkish citizens living in this district with a population of 84,727 [10]. When the number of cases which was investigated according to the population is proportioned, it is seen that there are similar proportions in refugees living in tent camps and in Turkish citizens living in this district. In addition, when the Global Tuberculosis Reports are examined, it is reported that the number of tuberculosis cases increased by years along with the war in Syria. It can be seen from our study that the number of cases of tuberculosis detected in refugees living in tent camps is lower than that in the country where they come from.

The results of our study show that there is no difference between Syrian refugees and Turkish citizens, and at the same time, the refugees are in a better position in terms of tuberculosis than in the countries they immigrate from. This can be explained by the lack of social and environmental problems brought by urbanization in the region where the study was

conducted, availability of unique social and environmental variables that are intertwined with nature, and adequacy of health services provided in the environments where access to health and other services is free of cost.

Regarding refugees and Turkish citizens, the similarity in the distribution of the applications to the Department of Chest Diseases and increase in infectious diseases such as tuberculosis among refugees living in tent camps suggest that the quality of health services offered in the refugee tent camps are close to the ideal services. Contrary to the expectations that anxiety caused by war among refugees is higher than that among Turkish citizens, the fact that Turkish citizens have anxiety rates similar to refugees and are affected by war as much as the refugees are, suggests that the healthcare and psycho-social support offered to refugees in tent camps should also be given to Turkish citizens and that new regulations are required in public health policies. We believe that the data from our study will shed some light on this issue.

Ethics Committee Approval: Ethics committee approval was received for this study from Ethics Committee of Harran University (Approval Date: 06.10.2016).

Informed Consent: N/A

Peer-review: Externally peer-reviewed.

Author contributions: Concept - Ş.K., Z.H.A.S.; Design - Ş.K., Z.H.A.S., R.C.; Supervision - Ş.K., R.C.; Resource - Ş.K., Z.H.A.S., R.C.; Materials - Ş.K., Z.H.A.S., R.C.; Data Collection and/or Processing - Ş.K., Z.H.A.S., R.C.; Analysis and/or Interpretation - Ş.K., R.C.; Literature Search - Ş.K., Z.H.A.S., R.C.; Writing - Ş.K., Z.H.A.S., R.C.; Critical Reviews - Ş.K., Z.H.A.S., R.C.

Conflict of Interest: The authors have no conflicts of interest to declare.

Financial Disclosure: The authors declared that this study has received no financial support.

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