More than Three Years of Medical Humanitarian Aid to the Syrian People

Salman Zarka MD MPH MA*

Director General, Ziv Medical Center, Safed, and School of Public Health, University of Haifa, Haifa, Israel

KEY WORDS: humanitarian aid, trauma, war injury, Syrian civil war

Since the spring of 2011, the Syrian Civil War has been an ongoing multi-sided armed conflict buoyed by international intervention. The facts are overwhelming [1]:

- 13.5 million people in Syria are in need of humanitarian assistance due to a violent civil war
- 4.8 million Syrians are refugees, and 6.5 million are displaced within Syria; half of those affected are children
- More than 70% of the Syrian medical community has fled and most of the health facilities are destroyed or damaged
- Some of the Syrian wounded turn to Jordan and Turkey for assistance, but some, sadly, remain untreated
- According to the World Health Organization (WHO), 57% of Syria’s public hospitals have been damaged while 37% are no longer functioning. Its pharmaceutical industry has been decimated. According to a report by Physicians for Human Rights [2], over 15,000 of Syria’s approximately 30,000 medical doctors have left the country, and more are following.

The WHO has confirmed the resurgence in Syria of once-extinct infectious diseases such as polio and leishmaniasis, as well as the emergence of measles, typhoid, hepatitis, H1N1, and tuberculosis epidemics [3]. The Syrian American Medical Society (SAMS) has estimated that at least 200,000 citizens have died due to non-communicable chronic diseases. Many more have died due to untreated cancer, poor access to treatment, and renal failure due to the absence of dialysis services. At least 600,000 Syrians have sustained lifelong disabilities, including amputation, spinal cord paralysis, burns, brain damage, and loss of vision. Injuries were caused by shrapnel, sniper bullets, and indiscriminate bombing with a variety of prohibited weapons. Millions of people, especially children, have sustained deep psychological scarring and post-traumatic stress disorder [4].

The hostility between Syria and Israel goes back to the country’s creation in the late 1940s, driven by Syria’s support for the Palestinian resistance against the new Jewish state. Syria went to war against Israel in 1948, 1967 and 1973. Today, although the war relationship between Syria and Israel still prevails, the official position of the Israeli government during the years of the civil war in Syria has been one of neutrality.

THE DILEMMA

On 16 February 2013, seven Syrian citizens, casualties of the civil war, arrived at the Israeli border asking for help. Israeli soldiers, trained to protect the border, found themselves in an unforeseen situation. The military medical forces stationed in the Golan Heights were called, provided first aid, and evacuated the wounded to Ziv Medical Center in Safed, the most northern hospital in Israel. Realizing that this was likely to happen again as the internal Syrian conflict spread close to our borders, a decision had to be made regarding wounded Syrians arriving at these borders.

We found ourselves in a dilemma between the legitimate decision to close the borders and wait until the situation improved on the Syrian side on the one hand, and extending a hand to the citizens of an enemy country on the other. Syria had tried many times to decimate Israel and several wars were waged between the two countries, the most well known being the Yom Kippur War in 1973 that resulted in thousands of causalities and wounded. Since Israel is Syria’s sworn enemy, it seemed legitimate to close the border. On the other hand, the argument to provide medical care has a solid basis. Jewish religious sources teach about helping the stranger and the enemy and command saving a life. Other peoples living in Israel (Christians, Druze, Muslims) have the same religious precepts. Another reason specific to the Jewish people is related to the scar of the Holocaust and the impact of helplessness.

The Israel Defense Forces (IDF) medical corps played an active part in the decision; for them it was simple. The IDF Medical Corps Oath mandates that each medical soldier swear to extend a helping hand to the wounded and the sick, whether common or distinguished, friend or foe [5]. The IDF has provided humanitarian support on numerous occasions around the world [6,7]. The Physicians’ Oath is unequivocal and commands every physician to save lives regardless of the patients’
identity and nationality. Thus, for the civilian medical staff, providing medical support to the Syrians is part of their ethos and duty. Based on those values, Israel decided to extend a hand to the Syrian people who reach the borders seeking help [8].

**The Medical Humanitarian Aid Algorithm**

We learned from our experience with the first wave of wounded Syrians (February 2013) that those with severe injuries may not survive the journey to Ziv Medical Center, which although only 30 klm may take hours due to the tortuous mountain roads and poor visibility in winter. A decision was therefore made to construct a military field hospital on the border [9]. The IDF, in cooperation with the northern civil hospitals, developed a treatment algorithm for care of the wounded based on three echelons [10] [Figure 1].

The first is at the border, where first aid is provided by the IDF Battalion Aid Station. Those not requiring additional treatment are returned to Syria [11]. Those who do require further treatment are evacuated if it is an emergency to the field hospital (the second echelon) constructed by the IDF in the Golan Heights, and to the northern civilian hospitals (third echelon) in non-emergent cases. For cases of complicated trauma, patients are transferred to the civilian hospitals after resolution of the emergent problem at the military hospital, thereby ensuring that they receive the best medical care. The northern Israeli civilian hospitals participating in this project are Ziv Medical Center in Safed, Western Galilee Medical Center in Nahariya, Padeh Medical Center in Poriya, and Rambam Medical Center in Haifa. These centers offer state-of-the-art medical treatment that to date has been provided to about 2400 Syrians.

Today the project consists of two components: medical emergency treatment given by the military medical staff on the Syrian-Israeli border; and further treatment, if needed, is provided by the northern hospitals after the patients are evacuated in military ambulances [Figure 2].

**Ziv Medical Center**

Ziv Medical Center is a relatively small hospital with 331 licensed beds and 7 operating rooms; it is located in Safed, 7 miles from the Lebanese border and 30 klm from the Syrian border [Figure 3]. Ziv serves more than 250,000 residents of the Upper Galilee and Golan Heights. This population represents a mosaic of diverse cultures and religions, and this mix of Jews, Muslims, Christians, Druze and Bedouins is reflected also in Ziv’s multi-ethnic staff of 1500 employees.

To date, Ziv Medical Center has treated 640 Syrian patients. The story began with the seven casualties mentioned above who were evacuated to Ziv in February 2013 [10] and continues until today. Most of the patients are male, 8% are women, and 17% are children. Their ages range from newborn to 80 years.

When this unique project started, the Syrians arrived at Ziv with war injuries; approximately one-third of these patients...
were treated by the general surgical team and most had severe orthopedic trauma that required multidisciplinary care. Later, Syrian patients started arriving at Ziv asking for treatment and medications that are not available in their country for acute and chronic diseases. In addition, by May 2016, 19 women had come to give birth in our center.

MORE THAN JUST SAVING LIFE

Usually, the aim of humanitarian medical aid is primarily to save lives; less to improve the quality of life. Typically, humanitarian aid is provided in temporary makeshift conditions [6,7,10] and various facilities and not in permanent centers that serve the general population. This humanitarian project is managed in a completely different way [10]. At Ziv, we provide humanitarian medical support in the permanent structure of a civilian hospital, using the same facilities (structure, manpower, etc.) that provide medical support to the Israeli population in the region. The care given is universal. All patients who enter our emergency room receive the same treatment, by the same staff, and Syrian patients are hospitalized in the same departments as Israeli patients.

With the aim of not only saving lives but also improving the quality of life, our surgical and orthopedic staff try their utmost to avoid limb amputations. Thus, many patients return to Syria able to walk. This means reoperating several times, prolonging the hospitalization period, and sending patients back to Syria with orthopedic devices that are extremely costly, such as the Ilizarov apparatus (a type of external fixation). After discharge, the wounded return to Syria with medications, medical documents in Arabic or English, and, in relevant cases, with orthopedic devices to help them in a country whose health care system has to all intents and purposes collapsed.

Syrian patients present an added challenge to the staff: they have no records. The patients arrive with no medical history, at various intervals after the injury and with different medical needs. The staff has no connection with the Syrian medical system and has to determine what happened. Our staff treats according to the story that the patient tells, and utilizes evaluation protocols including total body computed tomography imaging for trauma and blood and microbiology tests to diagnose complex situations. On rare occasions patients arrive with letters in Arabic from Syrian medical personnel, but most cases entail pure guesswork. The team does not know the patients, and on a few occasions the name the patient gave was not correct, which came to light when we heard other Syrian patients address the patient by another name. We attribute this to the fact that Syrians fear coming to Israel and try to hide their real identity. This poses a problem when a patient returns for treatment and we cannot locate the patient’s records that are under a different name.

NOT JUST MEDICINE

Caring for these wounded requires a distinctive approach that involves providing for the basic needs of the patients, not only physical but also psychological. Since they are without family support the Arabic-speaking social workers take on this role. Syrian patients in fact suffer three traumas: the war, their injury, and being in an enemy country. They hear Hebrew, Russian, Arabic and English and feel alienated and disoriented. The social and psychological aspects constitute a key part of the treatment they receive at Ziv Medical Center.

One of the most difficult challenges in this project is treating the children. Seventeen percent of all patients are children. Since they sometimes arrive without their parents we try to impart the feeling of home. In addition to our social workers Syrian women hospitalized in Ziv also help with the children [12].

GO WEST: A BRIDGE TO A NEW FUTURE

The story of Shahed (which means honey), a 6 year old Syrian girl, is a typical example. The child arrived at the border fence in a serious medical condition after losing a large amount of blood. She was accompanied by her mother and her young sister Inas. According to Shahed’s mother, their house was destroyed by a tank. Shahed was severely injured, her twin sister died, and her younger sister Inas, 4 years old, was also injured. Since there was no other medical care, people in her village suggested that she “go west” (Israel) to save her daughters. The mother, who for many years had felt afraid even looking at the Israeli border from her village and believed Israel was “the devil,” decided to “go west” and to ask the Israeli soldiers for help. She brought her children to the border and they were duly treated. Her conviction that Israel is the devil dissipated; before returning home she invited the staff to dinner in her home in Syria, “some day.” This story represents a major change in the attitude of Syrian citizens to Israel (at least those who come for treatment). Medicine can break down barriers and has the power to affect change.

A few years after the beginning of this humanitarian initiative, people began to arrive at the border seeking medical

Figure 4. Staff celebrating the birthday of a Syrian child at Ziv Medical Center (photo by Ziv staff member)
treatment unrelated to war injuries. They know that when they arrive at the border Israeli soldiers will bring them to Ziv where they will receive medical care at the highest level and will return home in better health. During the years of this project the staff at Ziv has seen a shift in Syrian citizens’ attitude to Israel – from enemy to “people who save lives.” They no longer fear being treated in Israel.

The military crew and the staff at Ziv feel privileged to provide humanitarian assistance to these victims of a cruel and pitiless war. Although the State of Israel has a long history of providing humanitarian aid [7], this time it is different [10]: Syria is a neighboring country but a hostile one. With this project, through the provision of medical care, perhaps a larger ‘healing’ will emerge. In the meantime, Ziv, Nahariya, Poriya and Rambam medical centers continue to treat and help those Syrians who cross our northern border [Figure 4].

**Correspondence**

Dr. S. Zarka
Ziv Medical Center, Safed 13100, Israel
Phone: (972-4) 682-8800, Fax: (972-4) 682-8444
e-mail: salman.z@ziv.health.gov.il

**References**

1. UN Refugee Agency (UNHCR), Office for the Coordination of Humanitarian Affairs (OCHA), International Organization of Migration (IOM), 3 February 2016.
5. IDF Physician Oath.
11. The Israel Patient’s Rights Law.

**Capsule**

**Immune activation in context**

Dendritic cells (DCs) initiate protective immunity upon binding molecules derived from microbes or released from dying cells. Zanoni et al. examined how microbial and endogenous signals interact to shape the course of the ensuing immune response. They found that oxPAPC, an oxidized phospholipid released from dying cells, binds to a protein called caspase-11 in DCs, activating an inflammatory program in these cells. Whereas caspase-11 binding to oxPAPC and bacterial lipopolysaccharide causes DCs to produce the cytokine interleukin-1 (IL-1) and undergo cell death, binding to oxPAPC alone triggers DCs to secrete IL-1 and induce strong adaptive immunity. Thus, context-dependent signals can shape the ensuing immune response.

*Science* 2016; 352: 1232

Etan Israeli

**Capsule**

**An essential role for the IL-2 receptor in Treg cell function**

Regulatory T cells (T<sub>reg</sub> cells), which have abundant expression of the interleukin 2 receptor (IL-2R), are reliant on IL-2 produced by activated T cells. This feature indicates a key role for a simple network based on the consumption of IL-2 by T<sub>reg</sub> cells in their suppressor function. However, congenital deficiency in IL-2R results in reduced expression of the T<sub>reg</sub> cell lineage-specification factor Foxp3, which has confounded experimental efforts to understand the role of IL-2R expression and signaling in the suppressor function of T<sub>reg</sub> cells. Using genetic gain- and loss-of-function approaches, Chinen et al. found that capture of IL-2 was dispensable for the control of CD4<sup>+</sup> T cells but was important for limiting the activation of CD8<sup>+</sup> T cells, and that IL-2R-dependent activation of the transcription factor STAT5 had an essential role in the suppressor function of T<sub>reg</sub> cells separable from signaling via the T cell antigen receptor.

*Nature Immunol* 2016; 17: 1322

Etan Israeli

“Life is like a game of cards. The hand you are dealt is determinism; the way you play it is free will”

Jawaharlal Nehru (1889-1964), first Prime Minister of India and a central figure in Indian politics before and after independence. Under the tutelage of Mahatma Gandhi, he is considered the architect of the modern Indian nation-state: a sovereign, socialist, secular, and democratic republic.