

## **Caring for Kurdish Refugees: Operation Provide Comfort**

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*In a medical way station, aiding returning Kurdish refugees in northern Iraq, 2,971 persons were treated over 23 days. The life-threatening illnesses were mainly related to malnutrition, dehydration, and enteric infections. Laboratory and other ancillary medical services were unavailable. Relying almost exclusively on clinical judgment and having to overcome a number of other significant obstacles, we achieved a high degree of success.*

As a result of the political situation in northern Iraq after the Persian Gulf War, as many as 800,000 to 1 million Kurdish people were driven from their homes into the mountains of Turkey. Operation Provide Comfort was enacted to provide aid for the displaced Kurds and to assist in relocating the people out of the harsh conditions of mountainous refugee camps.

In early May of 1991, our medical company, Charlie Company, 3rd For-

ward Support Battalion, 3rd ID, was deployed to Iraq to render medical aid to the Kurdish people. This paper will focus on the observations of the six medical officers who took part in this relief effort.

The 70-person medical company set up an aid station in an abandoned building in a mountainous valley in northern Iraq. This was located along a route that refugees used to move from the mountains in Turkey back to Iraq. The facility consisted of three examining rooms, a screening tent, a room for the pharmacy, and a storage area. As the patient load increased, two tents were erected for inpatient

treatment. This area was staffed 24 hours a day. When necessary we were able to refer patients to a British dressing station with a surgical capability that could provide more definitive care. Medical care was provided by six medical officers consisting of a board certified pediatrician, a board certified family practitioner, two general medical officers, two experienced physician assistants, and the nursing support of the medical company.

### **Medical Observations**

Our group operated this aid station for 23 days. A daily log was kept showing diagnosis, treatment, and disposi-

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tion of all patients. A total of 2,971 patients were seen of which 86 required inpatient treatment. A total of four patients died. One patient died at our treatment facility and three additional patients died after transfer to another facility. Forty-five percent of the patients were under the age of 18. Normally a higher percentage would be expected but the decreased number of young patients probably reflects the increased deaths in this age group during the time in the mountain camps (Table I).

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The two most common life-threatening medical problems we encountered were malnutrition with dehydration in infants, and typhoid in all ages. The following are two illustrative cases.

#### Case 1

KF, a 14-year-old female, had been living in a mountainous refugee camp for two to three months. For the past 20 days she had felt poorly with nocturnal fevers and a persistent non-productive cough. The last four days she had been unable to tolerate eating and had minimal fluid intake. She was brought from the mountains in the back of a large truck with 30 to 40 other people.

Pertinent findings on examination were T-40.2, P-94, BP-114/68. The patient was lethargic and appeared toxic. The eyes were sunken and the mouth was dry. Moderate generalized adenopathy was present. The lungs had diffuse rhonchi with minimal crackles in the bases. The left upper abdominal quadrant was tender and the spleen



Figure 1. USS Guadalcanal at one port of Iskenderum.



Figure 2. MEDEVAC Blackhawk at Silopi - 159th Med Det.

was palpable 2 cm below the costal margin. The skin was hot and dry with poor turgor.

She was clinically diagnosed as having typhoid and dehydration and was treated accordingly as were her

two sisters who had nearly identical presentations. After two days of chloramphenicol and IV fluids her fever began to be less pronounced; she was alert and felt better. By the fourth day she was discharged in

Table I. Patients Seen by Age.

Total No. of Patients	Age (years)						
	<1	1-5	6-11	12-17	18-29	30-59	>60
2,971	312	409	285	370	617	932	96
(%)	10%	(14)	(10)	(11)	(21)	(31)	(3)



Figure 3. French military field hospital at Zakhu valley.



Figure 4. Zakhu city hospital.



Figure 5. Italian field hospital at Zakhu.

markedly improved condition on continued therapy.

The diagnosis was thought to be typhoid based on the insidious onset of sustained fever, relative bradycardia, splenomegaly, and the setting the illness developed in. Further, experience with other patients with like illnesses supported the diagnosis. Her clinical course and response to Chloramphenicol were also typical of typhoid.

#### Case 2

KI, a 2-month-old male, was born to a 40-year-old female in the mountains. The infant presented with over 10% dehydration and severe malnutrition. The weight was approximately 3.5 kg. Length and head circumference were appropriate for age. The infant was listless with a decreased sucking reflex. The skin was tinted, eyes were sunken, and no tears were present. Pertinent findings at physical examination were T-36.5 (axillary), P-110, RR-30. The extremities were thin and peripheral pulses were poor. Rehydration was started with liquid protein/carbohydrate supplement, and IV fluids.

The mother stated that she had very little breast milk and this had been the infant's exclusive source of nutrition. This mother showed the typical signs of dehydration and was too ill for adequate oral hydration. Thus, IV hydration was started on her as well. Over the next 24 hours, functional breast feeding was gradually restored. Both the mother and her infant were discharged after two days in markedly improved condition.

#### Discussion

These cases bring up several interesting points. All patients seen were treated based on clinical judgement as our minimal laboratory capabilities were needed at another location. Treating patients based on clinical judgement alone was highly successful in the vast majority of cases. However, two of our 86 inpatient cases might have had positive outcome if adequate laboratory testing had been

available. Both cases were malnourished infants who died of sepsis. Clinically, malnutrition and dehydration appeared as the only problems. By the time sepsis was apparent clinically, it was too late for our intervention to be successful.

Prophylactic treatment of malnourished infants for potential sepsis was not possible based on the large number of potential candidates and our critically limited supply of appropriate parenteral antibiotics.

Unlike in the western world there were no alternatives to breastfeeding. With poor maternal hydration and nutrition, breastfeeding was often inadequate.

The poor hygienic conditions the refugees lived under were highly prone to the spread of typhoid and other enteric illness. These illnesses further debilitated the health of this population already compromised by poor hydration and nutrition.

A large variety of less critical medical problems were also encountered. Otitis media was present to a much lesser extent than we see in age-related western patients. However, complications of otitis media were seen much more frequently. Chronic tympanic membrane perforations in particular were common. This was felt to largely represent lack of adequate treatment. As would be expected with a mass exodus on foot, we encountered a host of musculoskeletal complaints and injuries. Sun exposure related skin disorders were ubiquitous. Acne vulgaris on the other hand was rather uncommon. Insect bites were also extremely common complaints.

Along with the common medical problems seen in a general medical practice we saw several unusual problems including the following: massive goiters, frequent thyroid nodules, suspected filariasis, Cushing's syndrome, gigantism, albinism, cancer of multiple varieties, untreated cyanotic congenital heart disease, tuberculosis, helminthic infestation, severe rickets, leishmaniasis, dry gangrene related to



Figure 6. CTF Provide Comfort Headquarters Incirlik, AFB Turkey.



Figure 7. Navy helicopter MH-53.



Figure 8. CTF Provide Comfort medical logistics staging area.

cold weather injuries, meningomyelocele, meningitis, severe anemia secondary to enteric disease, (hemoglobin < 3mg/dl), shrapnel wounds, traumatic amputations, nerve gas ocular injuries, untreated congenital hip dislocation, and status post epilepticus.

As we had no dentist present, our dental capabilities were limited to

simple extractions, temporary fillings, and patient education. In the examination of patients' mouths for any reason, it was rare to find totally intact dentition. Periodontal disease was highly prevalent and adequate oral hygiene was rarely observed. Toothbrushes and dental floss were generally unavailable.

An unexpected result of our activities was the creation of demand for western style medicine. Our facility became the focal location for medical care in the area. During the course of our stay we had numerous patients come for the novelty of seeing "American" doctors. Others came to get a "second opinion" about diagnosis

their physicians had made. We drew patients from all parts of Iraq, including Baghdad, for treatment of complex and multi-system diseases. These patients frequently brought laboratory reports and x-rays enabling us to hone our clinical assessment. However, we were unable to provide further treatment for many patients.

A final difficulty encountered in our activities was the periodic shortage of medications, particularly pediatric suspensions. We overcame these shortages by suspending adult medications in flavored syrup.

Of importance in the treatment of our patients was overcoming the language barrier. The ability to communicate with patients is a highly significant factor in the type of care given. We were fortunate to employ several interpreters, two of which were exceptional. One had been a second year medical student and the other was an officer in the Iraqi army. Even with these interpreters, adequate communication with patients remained problematic at times.



Figure 9. Kurdish refugee camp in MTS on Turkish-Iraq border.



Figure 10. Food distribution at Kurdish refugee camp coordinated by special forces personnel.





Figure 11. Measles immunization.



Figure 12. Measles immunization.



Figure 13. Nutrition survey.



Figure 14. American medical personnel at clinic they established near Sirsenk, Northern Iraq.



Figure 15. Gunner in Navy helicopter MH-53.

## CONCLUSION

In a very short time-span we were able to respond to the needs of a specific population. Despite many difficulties we were able to provide valuable care to the Kurdish refugees, preserving many lives and positively affecting others. Good clinical judgment and basic diagnostic skills remained the mainstay of our treatment, however, a small proportion of patients would have benefitted from the availability of laboratory data. ●