

## **Women For Women by IPRAS: Mission Chilmari Bangladesh**

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### **About the Region of Chilmari**

Bangladesh, a country of “a thousand rivers” with much of its geography embedded in water, was named the most densely populated country in the world by the World Health Organization. With a surface area of only 144,000 square kilometers and an escalating population of 160 million, diseases of poverty and overcrowding are rampant in the country. Living even below the poverty line for Bangladesh are the inhabitants of the northern riverbank of the Ganges-Brahmaputra delta. The people of this region are nomadic in nature and dwell on semi-permanent islands known in Bengali as “*Chars*”. (Figure 1) These islets formed from the melting snows of the Himalayas undergo constant formation and erosion from its powerful currents, and have typical lifespans of only months to a few years. Due to its vulnerable position at the northern most tip of Bangladesh, Chilmari in the district of Kurigram is a frequent victim of natural disasters such as flooding and cyclones. This was the location of the ninth mission for Women for Women by the International Confederation for Plastic Reconstructive & Aesthetic Surgery (IPRAS).

### **About Mission Chilmari Bangladesh**

In Bangladesh and other developing countries of the world, it is not uncommon for women to suffer from disfiguring physical injuries as a result of ethnic, social, marital, and other domestic disputes. The most common crime of female domestic violence in Bangladesh and other parts of South East Asia are burns, particularly acid burns to the face. This vicious form of attack is an unconscionable act that aims to disfigure the most presentable element of the female body. This is a large-scale problem that has afflicted Bangladeshi women for generations, from young to old, and from north to south. Only recently has it received its much-needed corrective attention, and today there is a national society based in Dhaka, the capital of Bangladesh, known as the Acid Survivors Foundation.

The mission of Women For Women, therefore, aims to “*help women suffering from physical injuries as a result of domestic abuse, war, or other socio-cultural reasons in third-world countries*”. Women For Women (WFW) is a charity program supported by IPRAS and its missions are carried by an international core group of socially conscious female plastic surgeons who share a common vision to restore the skin and lives of female victims of war and social crimes.

### **About the WFW Team to Chilmari**

Through a generous startup donation and sustained funding from the Emirates Airlines, the Emirates Floating Hospital (EFH) has provided essential medical care to around 4 million people of the chars since November of 2008. (Figure 2) The ability

of the EFH to be self-containing and mobile affords the hospital the unique ability to relocate every few months to serve a different char in addition to surviving natural disasters common to this region. The EFH is a suitably equipped hospital with one full-time onsite medical doctor, one optometrist, 4 ward nurses, 2 OR nurses, 2 operating rooms, a pharmacy, and radiology department. (Figure 3) In addition, with the invitation of Friendship, there is a regular roster of foreign missionary teams that provide specialized medical and surgical care a few times a year ranging from gynecology, orthopedics, cleft lip and palate, and finally plastic and reconstructive surgery by Women For Women.

Team WFW arrived in Chilmari on April 23 and began screening potential patients the same day on the EFH. The surgical team consisted of two senior plastic surgeons, Dr. Connie Neuhann-Lorenz (President of WFW, Munich, Germany), Dr. Toni Zhong (Plastic, Reconstructive and Microsurgeon, University of Toronto, Canada), and junior plastic surgeon was Dr. Michelle Locke from Auckland, New Zealand who completed her fellowship training at the University of Toronto under the supervision of Dr. Zhong. All three other members of the surgical team came from Munich, Germany, and consisted of Drs. Carola Stenzel and Christina Frey (anesthesiologists) and Mrs. Gabi Kerlstetter, a senior OR nurse.

### **About the Patients**

For five consecutive days from April 24 to April 28, our team performed approximately 45 procedures in 32 patients. Many of these patients had multiple sites of burn injuries. The ages of the patients ranged from 2 to 70, and the most commonly performed procedure was burn contracture release and reconstruction using a full thickness skin graft.

#### Case 1: Acid Burn to the Perineum

The most complex and demanding procedure of this mission involved the release of a severe full thickness acid burn to the perineum of a 17 year-old girl. She had an extensive burn contracture of the perineum that resulted in webbing of the proximal 1/3 of her inner thigh skin. (Figure 4a) Preoperatively, she had approximately 25 degrees of abduction between her proximal legs. Functionally, due to the distal extent of the webbing in her groin and both inner thighs, she was unable to provide independent perineal care. As a result, she was rendered to an infantile status where she had to have her basic personal hygiene needs provided by her family members. After reviewing her surgical options which were limited due to the presence of full thickness burns to both her thighs and the difficult nature of healing in the perineal region, we decided to reconstruct the anticipated large perineum defect caused by release of the contracture using a pedicled right vertical rectus abdominus mycutaneous flap (VRAM). (Figure 4b)

Since the EFH ORs are not equipped with ventilators which excluded the option of providing general anesthesia and paralysis to the patient, we were relegated to performing the entire surgery under regional anesthesia and conscious sedation.

(Figure 4c) In addition, to maximize the safety of the surgery and minimize OR duration, the three surgeons worked in concert and completed the entire surgery within an acceptable time frame with minimal blood loss. The patient was ambulating with assistance by postoperative day 1 and tolerating solid foods by postoperative day 3. Most importantly, for the first time in 3 years, she was able to provide personal hygiene care for herself, a right that should be basic to any adult human being.

## Case 2: Dowry Dispute - Burns to the Face and Neck

A 22 year old girl was attacked by her mother and sister-in-law the day after her wedding by setting fire to her veiled face and sari as a result of an unsettled dowry dispute. As a result, she sustained third degree burns to her face, neck, chest and arms. After barely surviving the initial extensive burns, she was finally repatriated by her own family for the remainder of her recovery. Feeling ashamed and worthless with her physical scars, her family had taken her to the EFH to seek our reconstructive expertise. (Figure 5a,b) She underwent release of severe burn contractures to the right side of neck with local flaps and FTSG, ear reconstruction using a superiorly based pedicled tubed flap, and release of flexion contracture of her index finger. Despite our reconstructive efforts at restoring some semblance of normalcy to her face and hand, she will likely remain a woman who will be permanently physically and emotionally scarred by this tragic and preventable assault.

## The Future

In a society built on thousands of traditional rituals and customs, intentional burn attacks on women is one ritualistic practice that must be eliminated. Even today, one Bangladeshi woman is attacked with acid every two day. Especially in the “char” regions of Northern Bangladesh where its residents have been completely neglected by the government and foreign non-government organizations (NGO), WFW intends to strengthen its loco-regional presence in assisting marginalized female patients who have nowhere else to turn. With the support of local organizations such as Friendship, and continued funding from Emirates Airlines and other sponsors, WFW team aims establish sustainability by educating, preventing, treating, and re-integrating female victims of burn injuries.



Figure 1. Aerial photo of the Char region

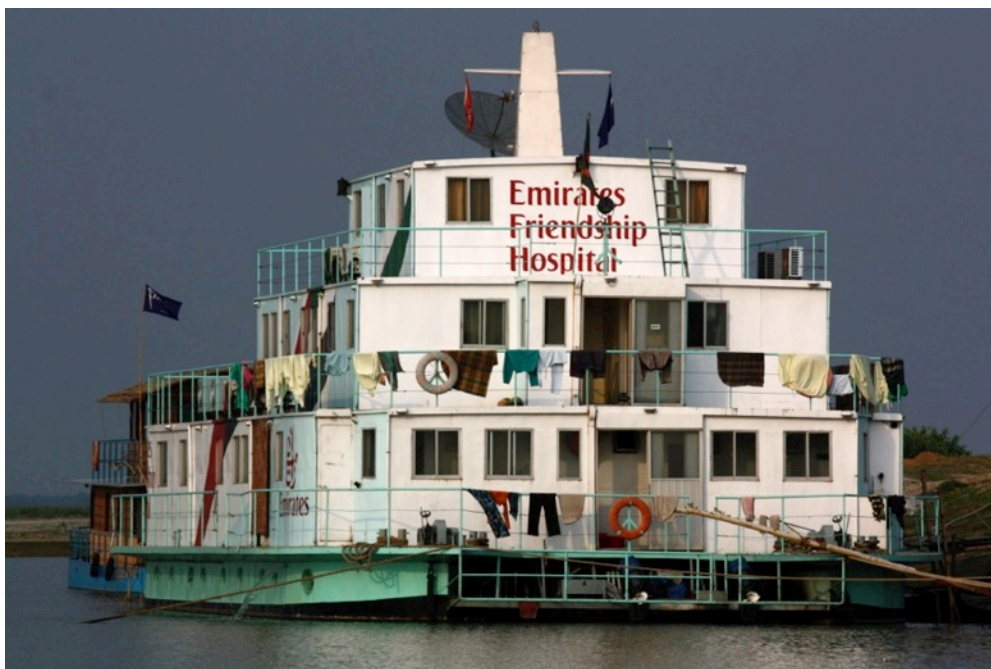


Figure 2: The Emirates Floating Hospital on the bank of the Ganges-Brahmaputra River that provides medical service to 4 million people of the Char region.



Figure 3: The Operating Theatre on the EFH.



Figure 4a: Preoperative photo of an untreated full thickness perineal burn that resulted in webbing of the perineum.



Figure 4b: Intraoperative design of the pedicled VRAM flap and postoperative views after release of contracture and reconstruction. Note the amount of leg abduction that is possible following reconstruction.



Figure 4c. Anesthesiologists Drs. Stenzel and Frey inserting a spinal block preoperatively.



Figure 5a,b: Pre-operative views of burns to a 22 year old girl's face and neck