Field Evaluation and Treatment of Short-Term Psycho-Medical Trauma after Sexual Assault in the Democratic Republic of Congo

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ABSTRACT: **Background:** During the horrific war in the Democratic Republic of Congo during the years 1996–2007 the number of casualties is estimated to be 5.4 million. In addition, 1.8 million women, children and men were raped, many as a social weapon of war. Many of these women still suffer from post-traumatic stress disorder (PTSD) and mutilated genitals.

Objectives: To assess a short-term interventional team for the evaluation and treatment of sexual trauma victims.

Methods: The intervention program comprised four components: training the local staff, medical evaluation and treatment of patients, psychological evaluation and treatment of trauma victims, and evacuation and transport of patients with mutilated genitals. A diagnostic tool for post-traumatic stress disorder (PTSD) – the Impact Event Scale (IES) – was used. The psychological treatment was based on EMDR (eye movement desensitization and reprocessing) principles. Using questionnaires, the information was obtained from patients, medical staff and medical records.

Results: Three primary care clinics were chosen for intervention. Of the 441 women who attended the clinics over a period of 20 days, 52 women were diagnosed with severe PTSD. Psychological intervention was offered to only 23 women because of transport limitations. The most common medical problems were pelvic inflammatory disease and secondary infertility. Nine patients suffered genital mutilation and were transferred for surgical correction. The 32 local nurses and 2 physicians who participated in the theoretical and practical training course showed improved knowledge as evaluated by a written test.

Conclusions: With the short-term interventional team model for sexual assault victims the combined cost of medical and psychological services is low. The emphasis is on training local staff to enhance awareness and providing them with tools to diagnose and treat sexual assault and mutilation.

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The violence in the eastern area of the Democratic Republic of Congo erupted in 1996 and continued until 2007, followed by intermittent periods of peace [1]. However, extreme sexual violence is still common in the DRC and other regions of Africa [2]. The number of casualties is estimated to be 5.4 million (during the period 1998–2007). Approximately 1.69 to 1.80 million women reported having been raped [3,4].

During the war in the DRC a horrific weapon was used – sexual attacks against women, girls, and occasionally men. The sexual assault "weapon" was used not only by one party, but by almost all the armed forces involved in the conflict. Military and semi-military troops also played a major role in these atrocities [3]. This weapon was employed to terrorize the population into accepting their control as well as to humiliate them. Women were kept as sex slaves in camps, raped and forbidden to undergo an abortion. Fathers were forced at gunpoint to rape their daughters. In recent years most of the sexual assaults were perpetrated by civilians and by intimate partners rather than by combatants, as many combatants withdrew from organized military forces and blended into civilian society [4,5].

The effects of the sexual attack are divided into four stages:

- The immediate period, when direct trauma to the genital region may occur. This may result in genital trauma and bleeding (which may be life-threatening) as well as infections
- The intermediate period, when fistulas from various

DRC = Democratic Republic of Congo

sources involving the genitourinary tract and the gastrointestinal tract may develop [6]
- Longer-term effects include the development of sexually transmitted diseases, such as human immunodeficiency virus [7]. The long-term effects may involve genital or urinary problems and infertility. In addition, there are often long-term psychological effects, which may manifest as an increased tendency to commit suicide as well as the onset of psychotic features later in life [8,9]
- A long-lasting social effect, involving not only the victims but also their spouses, families and the entire Congolese society [10].

The study was performed as part of a field assignment to assist sexually assaulted victims. For some medical personnel from developed countries who are interested in assisting victims of sexual assault, only short-term assignments are available [11]. Nevertheless, much can be achieved even with short-term intervention. This paper presents our experience with this type of program.

SUBJECTS AND METHODS

In August 2008 a group of eight Israeli professionals including gynecologists, a nurse and a psychologist were organized by the Israeli aid organization "Latet" and the Malteser International Aid Organization [3]. The group underwent preliminary training regarding the cultural and medical background of the population, the war, genitourinary trauma and fistula, and the psychological survey and intervention techniques.

After arriving in the DRC with medications and basic surgical equipment, we established three rural primary care clinics focusing on sexual assaults for a period of 20 days. The clinics were chosen to be remote so that service could be provided to populations that normally have limited access to medical and psychological services. The local staff included nurses, physicians and social workers.

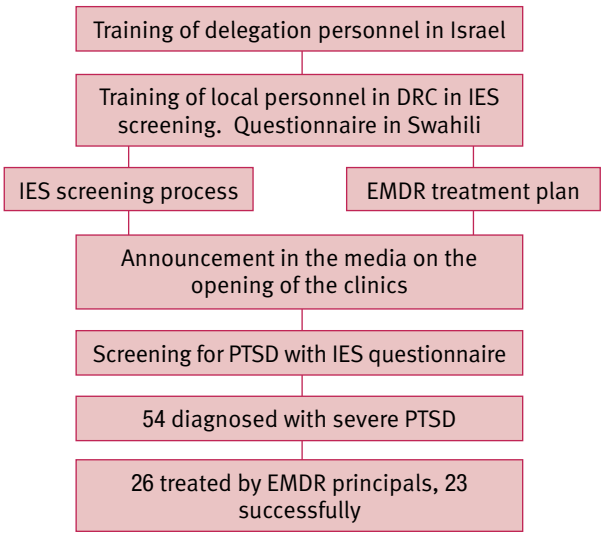
The evaluation and intervention plan consisted of four components. The first involved training the local staff, which comprised 32 nurses, 2 local physicians and 3 social workers. They participated in a 28 hour course on primary care gynecology, with emphasis on genital trauma and mutilation and the psychological aspects of sexual assault. Their knowledge of these subjects was evaluated by pre- and post-course written examinations. The second component was the clinical gynecological and medical evaluation and treatment of the patients. The third component was the psychological evaluation and treatment of trauma victims. The last aspect was evacuation and transport of patients with mutilated genitals to a central hospital in Bukavu for further gynecological reconstructive surgery [12].

For the psychological survey, we used the IES (Impact of Event Scale) questionnaire developed by Horowitz [11]. The IES can be used to assess psychological stress reactions after a major life event. The questionnaire addresses a particular stressful event in the patient's life and measures two categories of responses: intrusive experiences, and avoidance of thoughts and images associated with that event. The instrument consists of 15 items divided into two subscales: IES intrusion (7 items) and IES avoidance (8 items). The format is a self-report that asks the subject to note the frequency of symptoms in the past 7 days [13,14]. The questionnaire was provided in French or Swahili, depending on the language spoken by the interviewee. The questionnaires had been validated previously [15]. Patients who were illiterate had the questionnaire read to them in their mother tongue. The respondents were asked to focus their answers as much as possible on the sexual assaults and not on other experiences of the war. Women with high scores on the questionnaire and who provided consent were immediately referred for short-term support based on the eye movement desensitization and reprocessing treatment for psychologically traumatized individuals [16].

RESULTS

The sexual assaults in our study population occurred between 1999 and 2005. Altogether, 440 victims were observed in the clinics. The most common diagnosis in patients who attended the clinic were physical or PTSD symptoms follow-

Figure 1. Algorithm: Impact of Event Scale (IES) – screening and eye movement desensitization and reprocessing (EMDR) intervention plan in sexually abused women in the DRC



IES = Impact of Event Scale
PTSD = post-traumatic stress disorder

ing sexual abuse; these included pelvic inflammatory disease, urinary tract infections, infertility, prolapsed uterus, vesicovaginal fistula, and cystocele. Nine patients whose genitals had been mutilated mutilated were transferred for surgical correction. Fifty-four were diagnosed with severe PTSD. The average time lapse between the assault and completion of the IES questionnaire was 5 years [Figure 1].

Thirty-two local nurses and 2 physicians participated in the theoretical and practical training course. We found a 22% increase in their knowledge and clinical skills after completion of the course.

In the IES evaluation, the average avoidance score of the group was 22.4 and the intrusion subscale score was 26.9. The total IES score of the group was 49.3, placing it in the severe clinical range. The results ranged from 37 to 58, all in the moderate to severe range. Only 2 women had a moderate form and 26 had results in the severe range.

In 23 of the 26 patients whose psychological treatment was monitored, the treatment was deemed a success in the short term. The other 28 did not undergo formal psychological treatment due to transportation limitations.

DISCUSSION

It is a tragic reality that women and children are targeted for sexual attacks as part of war. This is not unique to Africa, but it has become a form of social weapon in the war in East Congo and other places [7,8].

Medical teams from around the world who volunteer to assist in these areas in many instances lack the medical/gynecological and psychological training to address this complex topic. Some of them settle in these regions for longer periods and play an active role in training and treating both the local staff and the population. This approach is probably most effective when looking at a long-term contribution to the community. Nevertheless, there are medical teams from developed countries who elect to devote several weeks or months to a community in need. We present our experience with a short-term, small, low budget intervention team in a situation where war and sexual violence coexist.

RAPE WITH EXTREME VIOLENCE

It is suggested that the type of sexual violence perpetrated against the Congolese women, men and children should be classified as an extreme form of sexual attack that can also occur in developed countries. It has been suggested that these extreme cases of sexual brutality should be termed "rape with extreme violence" [12]. Often this type of sexual brutality is characterized by group rape. In many cases women have their genitals mutilated with guns, or sharp or hot objects. Some attackers isolate their victims as sex slaves in camps, preventing access to their families as well as to any medical or social assistance [12]. A heartrending offshoot of this sexual brutality is that some victims of these atrocities, once they escape or are released from the camps, become ostracized by their husbands and families. They find themselves living isolated with no social support and with mutilated genitals. Frequently the mutilation causes fistulas – both urinary and bowel to genital.

FISTULAS

Fistulas of the genital system cause not only recurrent pelvic and urinary infections and incontinence but are also responsible for offensive odors that increase the victim's social isolation [17]. Approximately 63% of all REV victims who were referred to Panzi Hospital in Bukavu, DRC, had a gynecological complication of the rape [12], while 30% had a fistula as a result of the assault.

Transfer of the victims to the regional hospital sometimes presents an insurmountable barrier. Many times it is the high cost of a long trip or safety issues that prevent the victims from obtaining surgical treatment. We defined evacuation and safe transfer of the patients to a facility that can provide definite treatment as part of the goals of the medical delegation.

PSYCHOLOGICAL EVALUATION AND INTERVENTION

We chose the IES test as the tool for diagnosing PTSD, but there are other diagnostic tools [18]. The IES was chosen because it is a simple test comprising 15 short questions and has been validated for many languages. Medical teams that have little experience with psychological evaluation are able to use this tool under field conditions.

The intrusion and the avoidance scores in this study were higher than most of the scores in major studies of the last 20 years [14]. Among the eight types of trauma exposure, sexual assault was one of the most severe causes of high post-trauma scores. In our patients the average score on intrusion was 26.9, while the scores cited in the literature range from 2 to 22. The avoidance score in the 20 studies ranged from 2.5 to 17.7 while our average score was 22.4. A possible explanation for such high IES scores in the women participating in the survey is that the trauma was multi-faceted, involving sexual assault and a war situation combined with social isolation and prolonged handicap.

We directed our questions to the sexual assault event(s) and found that approximately 10% of all women who visited the clinic had been sexually abused during the war. This figure is not a particularly high rate of sexual abuse in the general population in Africa or in the developed world [8,19]. Possible explanations for the rather "low" prevalence of reported sexual abuse could be language and cultural barriers that prevented women from exposing the trauma to "strangers," or the time

REV = rape with extreme violence
EMDR = eye movement desensitization and reprocessing

that had elapsed between the assault and the evaluation.

The treatment plan was based on the EMDR technique (eye movement desensitization and reprocessing). This form of therapy was developed by psychologist Dr. Francine Shapiro. EMDR involves recalling a stressful past event and "reprogramming" the memory in the light of a positive self-chosen belief, while using rapid eye movements to facilitate the process [16]. The EMDR was developed to resolve emotional distress and negative thoughts resulting from disturbing and unresolved life experiences. It is especially effective in treating various forms of post-trauma symptoms, or PTSD. It is also effective for unresolved experiences that result in other forms of psychological problems, such as phobia, panic disorder, eating disorders, and generalized anxiety. Traditionally EMDR is performed with movement of the eyes, but since its discovery alternate forms of sensory stimulus (e.g., sound, such as tapping) have been found to be equally effective in many cases. This therapy was chosen because of the rapidity of the intervention and its effectiveness.

SEXUALLY TRANSMITTED DISEASES

Victims of sexual assault are at risk of contracting a sexually transmitted disease. In the region involved in the war there are limited resources available to prevent or cure these diseases. In contrast to prophylactic medical treatment for sexual assault victims in developed countries, who receive antiretroviral medications, antibiotics for infections and hormones to prevent pregnancy, most of the population in south Kivu did not receive any treatment [12].

In a study of victims referred to the Panzi Hospital in Bukavu, 37% of all women had acquired an STD . The rate of HIV was 4.5% [7,20,21]. The economic considerations of providing prophylactic medications for HIV infection is a topic for further discussion.

PREGNANCY

Many victims of sexual assault were kept as sex slaves in camps for many months after the initial rape. Medical assistance was withheld from them, particularly treatment for STD and prevention or termination of pregnancy. This policy is intentional and is part of the humiliation and racial war being conducted. The pregnancy and delivery of a child whose biological father is a rapist creates special emotional problems for the child and its mother. This hugely difficult situation prevents the victim from recovering fully from the trauma.

STAFF TRAINING

Training the local staff is an essential goal for any short- or long-term delegation to regions in need of medical aid. Such training increases the awareness of the staff and the population to the problem and provides them with tools to cope with it after the delegation leaves. Evaluation of the efficacy of the course is important. We showed that there was approximately a 20% increase in the psychological and medical knowledge of the staff following the training course. The practical experience of the staff in the diagnosis of fistula was also evaluated. The present report is limited to evaluation of a short-term intervention program; long-term programs are encouraged and essential for this underprivileged population [21].

STD = sexually transmitted disease
HIV = human immunodeficiency virus

CONCLUSIONS

We present our experience with a model of a local short-term intervention involving a small and low cost medico-psychological staff. The acquisition of medical knowledge by the local personnel was found to be satisfactory, and the use of the IES for evaluation and the EMDR tools for treatment proved to be effective in the short term.

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