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## GIVE BACK A SMILE AND GIVE BACK A LIFE: RESTORING THE SMILE OF A DOMESTIC VIOLENCE SURVIVOR IN FLORIDA

### INTRODUCTION

Intimate partner violence (IPV) is “a pattern of assaultive and coercive behaviors that may include inflicted physical injury, psychological abuse, sexual assault, progressive social isolation, stalking, deprivation, intimidation, and threats.”<sup>1</sup> According to the U.S. Department of Health and Human Services, “nearly one third of American women will experience intimate partner violence (IPV) or domestic violence.”<sup>1</sup> The Family Violence Prevention Fund indicates “these behaviors are perpetrated by someone who is, was, or wishes to be involved in an intimate or dating relationship with an adult or adolescent, and are aimed at established control by one partner over the other.”<sup>1</sup>

Domestic violence or violence between intimates “is difficult to measure because it often occurs in private, and victims are often reluctant to report incidents to anyone because of shame or fear of reprisal.”<sup>2</sup> However, studies indicate that injury location is one possible predictor associated with IPV-related injury.<sup>3</sup> In fact, it has been reported that “94% of victims of domestic violence have head, neck, and facial injuries.”<sup>4</sup> According to Zeitler, “a woman seeking treatment of a facial injury has a one in three chance of being a victim of violence and abuse.”<sup>5</sup> This includes trauma to the teeth, oral structures, and the temporomandibular joint (TMJ).

In general, “women experiencing IPV are more likely to report poor physical and mental health”<sup>6</sup> and in fact are at greater risk for health issues. Studies indicate that IPV poses a significant risk to the physical health of women and is associated with, among other issues, worse general health.<sup>7</sup> “An estimated 1.3 million women are victims of physical assault by an intimate partner each year.”<sup>8</sup> In 2006, in the State of Florida alone, there were 115,170 reported cases of domestic violence.<sup>8</sup>

### GIVE BACK A SMILE PROGRAM

The American Academy of Cosmetic Dentistry’s (AACD) Give Back A Smile™ (GBAS) program is dedicated to helping the survivors of domestic violence.



*Figure 1: Hilary's smile when she presented for her first visit shows caries, and staining from smoking.*



*Figure 2: Retracted view; teeth in occlusion show the extent of caries present.*

Dental services are provided to qualified survivors at no cost. The program hopes to raise the awareness of domestic violence by giving volunteer members of the AACD a chance to give to the community, while giving survivors hope for tomorrow by restoring their oral health.

### **SURVIVORS OF IPV AND ORAL/ OVERALL HEALTH**

Oral health is one of the domains of health that can affect functioning and hence the overall feeling of health. "Oral health problems can result in pain and discomfort and lead to problems in eating, communication, and appearance, and consequently to embarrassment, social problems and low self esteem."<sup>9</sup> In order to maintain good oral health, an individual must seek care consistently. It has been shown that victims of IPV often are prevented from receiving care because they are prevented from seeking care. The link between socio-economic status and oral health outcomes reflects this. Income has a direct effect on the ability to access goods and services. Victims of IPV are also denied the funds needed to seek treatment. According to Locker, "... inequalities,

including inequalities of opportunities, life chances, and achievement, are accompanied by inequalities of respect and self esteem."<sup>10</sup>

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A myriad of psychological problems also affect the overall well-being of IPV survivors. Self-esteem often is an issue for victims of domestic violence, and there are many links between low self-esteem and depression.<sup>11</sup> One's self-esteem in turn affects quality of life. Oral health conditions are known to affect various aspects of quality of life such as "pain, impaired speech chewing ability, taste, and appearance."<sup>12</sup> Additionally, "the number of missing teeth, function and number of filled teeth were all significant for well-being."<sup>12</sup> This clearly positions the oral health status of an individual as affecting his or her overall mental health. According to Locker and Allen, "when talking about oral health, our focus is not on the oral cavity itself but on the individual and the way in which

oral disorders, diseases and conditions threaten health, well being and quality of life."<sup>13</sup> According to the World Health Organization, *health* has been defined as a "state of complete physical, mental, and social well being, not merely the absence of disease or infirmity."<sup>14</sup> The job of GBAS volunteer dentists is to help survivors of domestic violence get one step closer to overall health.

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### **CASE REPORT**

#### **PATIENT HISTORY**

"Hilary" was referred to our office by the GBAS program. My office staff and I were excited about the opportunity to help. Hilary had been subjected to physical abuse as well as restrictive behaviors. She had been prevented from obtaining health care and from having insurance, making medical and dental treatment cost-prohibitive. Female victims of IPV are generally less likely to have access to preventive and injury-related health care, com-



*Figure 3: Maxillary occlusal view at initial examination.*



*Figure 4: Mandibular occlusal view at initial examination.*



*Figure 5: Restored maxillary occlusal view.*



*Figure 6: Restored mandibular occlusal view.*

pared to women who have not been abused.<sup>1</sup>

Even though Hilary lives more than an hour from our office, she would come to her appointments filled with anticipation about the outcome. She was dedicated to reaching her goal of optimum oral health and regaining her smile.

Hilary had several broken teeth, as well as several teeth that were grossly decayed due to neglect. Her teeth also were extremely stained from smoking (Fig 1). Women who experience IPV are more likely than women who are not abused to use

tobacco.<sup>1</sup> After much physical and psychological abuse she felt dejected and hopeless.

#### **DIAGNOSIS, FINDINGS, AND TREATMENT PLAN**

Lack of dental care had resulted in Hilary having several severe dental problems and generally compromised oral health. A comprehensive examination—including examination of the muscles in the head and neck, a complete periodontal probing of all teeth, an oral cancer screening, a hard and soft tissue exam, as well as a TMJ exam and evaluation of her occlusion—was

completed. During this visit radiographs, intraoral photographs, and digital photographs were taken. Several nonrestorable teeth and teeth needing endodontic treatment were noted. Caries was noted on nearly every tooth; in many instances, it was wrapping around the entire cervical area of the anterior and posterior teeth (Figs 2-4). Subgingival calculus was also present in all four quadrants. The extent of her caries and the number of missing and hopeless teeth made this a much more complicated case than originally anticipated. Anterior esthetics



*Figure 7: Restored retracted view with teeth in occlusion.*



*Figure 8: Smile view after all restorative treatment and whitening had been completed.*

became involved, in addition to the restoration of form and function.

Impressions for study models and a facebow recording were taken. A centric bite was taken using a leaf gauge. Along with photographs, this information was sent to Suncoast Ceramic Studio (Brandon, FL), the volunteering dental laboratory, for a diagnostic wax-up. Because Hilary was in need of several phases of dentistry to reach optimum oral health, specialists would also need to be involved.

#### DISCUSSION

My concerns with this case were many. Although I already had a local dental laboratory that volunteered with GBAS, I would also need to approach an endodontist and an oral surgeon to ask them to donate their services. In addition, I suspected the extent of caries on several teeth to be greater than evident, possibly changing treatment. Bridges would be needed in a couple of areas and material selection and shade matching would be an issue.

Keeping Hilary motivated through the many appointments needed might also be a challenge; educating her on how to better care for her teeth was also important.

However, as obtaining a new smile and a healthy mouth were her chief aims, I knew that with patience and determination we could achieve her goals.

#### TREATMENT

Hilary went through full-mouth scaling and root-planing procedures, using local anesthesia as needed. She was given oral hygiene instructions and a Sonicare electric toothbrush (Philips; Stamford, CT). Because she had expressed an interest in quitting smoking, we provided her with materials from the University of South Florida's (USF) Area Health Education Center (AHEC), a department of the USF College of Medicine dedicated to tobacco cessation. Along with the materials provided by AHEC, we gave Heather a fax referral to the Florida Department of Health's QuitLine, a toll-free telephone-based tobacco use cessation service. Any person living in Florida who wants to quit smoking can use the QuitLine (877.822.6669). Once our office faxed the referral to the QuitLine, a QuitLine counselor contacted Hilary to assist her with smoking cessation.

Nonrestorable teeth #3, #5, #18, #21, and #31 were extracted by Dr.

Theodore Peters (Tampa, FL). Several teeth needed endodontic therapy. Hilary was sent to Dr. Christian Kamaris (Tampa, FL) for root canals on #4, #13, #20, and #22. Both of these dentists had graciously agreed to help complete the case at no charge.

Hilary was then treated in two phases. All of her maxillary teeth were restored at one time. As caries was removed it was determined that full coverage was needed on most teeth to restore form and function. The maxillary anterior teeth exhibited extensive Class III caries and cervical caries wrapping around the teeth, prohibiting the use of veneers or fillings (Fig 2). Crowns therefore became the best restorative option. Hilary's maxillary arch was temporized using the wax-up from the laboratory as a guide. She presented for a follow-up visit to evaluate and modify her temporaries. After she accepted the temporaries, the restorations were fabricated. Emax (Ivoclar Vivadent; Amherst, NY) restorations were chosen for strength and so that color matching between materials would not be an issue. A bridge was fabricated to replace tooth #12. The remaining maxillary



Figure 9: Hilary, very happy to have her smile back.

teeth were restored with crowns or veneer/onlays (Fig 5).

In the mandibular arch, crowns were placed on #28-30. A bridge was fabricated from #20 through #22 (Fig 6). The mandibular arch was then treated with 10% Opalescence (Ultradent; South Jordan, UT) in custom trays. Occlusion was checked and anterior guidance was confirmed.

When Hilary presented for a postoperative evaluation she was extremely comfortable. All of her tissues were healed. Final photographs were taken (Figs 7 & 8). Impressions were taken for fabrication of a night-guard. Hilary was very pleased with her final results--she finally had her smile back (Fig 9)! Her confidence was returning and her outlook on life had improved.

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*Hilary can truly smile now; we helped to restore her self-esteem.*

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## REWARDS

It was incredibly moving to be allowed into Hilary's world. She shared her story with us and trusted us to help her. She touched everyone in our office with her posi-

tive attitude and unrelenting desire to succeed. Over the months that we worked with her we all became friends, sharing daily stories and experiences. Hilary can truly smile now; we helped to restore her self-esteem. Since completing her dental treatment she is working consistently and is a more productive member of society. Because she now has reliable income she will be better able to seek health care. I feel very fortunate to have helped Hilary in her journey to a more fulfilling life. The opportunity to be able to use my skills as a gift to improve someone's life was priceless.

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