

Finally, It Is Our Turn!

Although it is universally appreciated that long-standing diabetes is associated with sexual dysfunction in men, the state of inquiry into sexual dysfunction in diabetic women is rudimentary. A literature search (1) on sexual dysfunction in diabetic men reveals 1,983 articles published in the last 5 years. In a similar computer search directed toward diabetic women, 13 articles appear, a paltry (and unlucky) number. But there is promise! A 14th article, "Sexual dysfunction in women with type 1 diabetes: a controlled study," by Enzlin et al. (2), appears in this issue of *Diabetes Care*, taking steps to make up for this discrepancy.

Compared with the few studies in the literature, this article is an evidence-based report. The study was designed to 1) examine the prevalence of sexual problems in women with type 1 diabetes, 2) compare this prevalence rate with that of an age-matched control group, 3) study the influence of diabetes-related somatic factors on female sexuality, and 4) study the influence of psychological variables on the sexual function of both groups. The authors studied 120 women with type 1 diabetes compared with an age-matched control group of 180 women without diabetes and asked them to complete questionnaires.

This paper could be criticized for the following: 1) a retrospective chart review (not considered the best method for data ascertainment in the scientific literature) was used in the group of diabetic women to collect HbA_{1c} levels; 2) the chart review was also used to collect prevalence of diabetic complications (thus, no consistent method was used to document retinopathy, neuropathy, or cardiovascular disease, only the notes of a busy clinician); 3) the survey was performed in women attending a clinic in a Catholic University (is this study applicable to type 1 diabetic women in general, or could the results reflect the views obtained in a clinic that is part of a controlled population, so to speak?); and 4) most importantly, these women were classified as being in a "stable" marital relationship (perhaps if diabetic women have severe sexual dysfunction,

then achieving a "stable" marital relationship would most likely be an impossibility).

In addition, the duration of the marital status may play a role in the prevalence of problems (as is commonly perceived, sexual activity decreases as the duration of marriage increases). Ideally, a subset analysis of those women who were taking birth control pills or hormonal replacement therapy should be performed because the ages of the women included postmenopausal years. There is a concern that sexual dysfunction may be related to hormonal status, independent of glucose status.

Despite these criticisms, this paper is a beginning toward bringing to light the issues surrounding sexual dysfunction in diabetic women. The authors reported that significantly more diabetic women refrained from sexual activity and were more dissatisfied with their sex life than the control subjects. In addition, more diabetic women reported sexual dysfunction. Of note, women with diabetic complications do not have more sexual problems than those without diabetic complications. No correlation was found between HbA_{1c} and sexual dysfunction. The main finding was that sexual problems are frequent in women with diabetes, with the main difference in diabetic women compared with nondiabetic women being the problem of arousal.

To identify that a type 1 diabetic woman has sexual dysfunction and prescribe appropriate treatment, the history and physical examination should be directed toward the most likely cause. Although it seems a given, if a woman does not feel in the mood for sex, she cannot function properly during sex. Arousal includes the psychological state and the resulting physical responses of vaginal changes, including secretion of lubricating moisture, relaxation of pelvic floor muscles, and engorgement of labia and clitoris. If psychological arousal does not occur, the physical response can be elicited with physical manipulation, but until proper moisturizing occurs, and relaxation and engorgement take place, trauma may occur and impede the physical response. Therefore, the mood of a diabetic

woman is key in the whole process of sexual enjoyment (3).

Similar to nondiabetic women, libido is a function of response to the partner, the immediate atmosphere, distractions, stress, fatigue, and hormonal status. Fear of conception or contracting a sexually transmitted disease can impede spontaneity. The health care provider must offer optimal advice as to the best means of birth control, and words of wisdom about barrier protection to minimize the risk of transmission of sexually acquired infections. Birth control pills have little impact on glucose control and/or insulin needs (4), but attention toward the clotting cascade and the estrogen-induced hypertriglyceridemia that may occur does necessitate that the women be monitored closely. Of course, these hormonal techniques do not offer protection against sexually acquired infection, and thus simultaneous use of a condom in uncertain situations should be encouraged.

Once the fear of unwanted pregnancy and contraction of infection are alleviated (5) and the patient is still unable to be aroused, then careful probing into the problems within the relationship may reveal that the significant other is fearful of the woman's diabetes, be it contracting infection from her or somehow hurting her. The mere fact that a woman has diabetes may be the reason the partnership has trouble. If the woman either does not pay enough attention to keep herself healthy or is so preoccupied with her diabetes that other aspects of life are secondary, individual and marriage counseling are in order.

It is known that women suffer from depression twice as frequently as men (6). Although the literature is sparse, it has been reported that diabetic women suffer an even greater prevalence of depression than nondiabetic women (7,8). In addition, intermittent or sustained hyperglycemia can cause depression (9). The libido in most women is so fragile that even minor episodes of depression can result in loss of libido. Thus, if the diabetes is not well controlled, there may be a co-existing depression that is the seed of the sexual dysfunction. Paramount in treat-

ment programs for sexual dysfunction of diabetic women is the simultaneous institution of intensive glycemic control protocols. Work-up and treatment of the degree of depression is crucial in the assessment of the diabetic woman with sexual dysfunction. Appropriate and specific antidepressive medications are beneficial. Psychiatric consultation as a means to choose the optimal antidepressive medication is helpful. Many times, the medications can be discontinued as the other problems and glycemic levels improve.

Arousal, foreplay, intercourse, and orgasm are all activities of energy expenditure. Depending on the duration and repetition of response and climax, 0–600 kcal can be used. If the blood glucose level is normal or low at the time of initiation of sexual behavior and the stomach does not have enough extra food in reserve, the response to strenuous sexual activity may be hypoglycemia. Hypoglycemic symptoms not only are distracting, but also if the woman falls asleep immediately after the activity without checking her blood glucose and replenishing her glucose stores, or her doses of bedtime insulin are not adjusted downward to compensate for the exercise, hypoglycemia may be life-threatening.

Now that there is evidence-based

medicine to suggest that arousal is the main problem, intervention can be designed to treat the problem. Studies of the use of the newest drugs for male sexual dysfunction (such as vardenafil and tadalafil) can now be studied in women. Enzlin et al. (2) have not only given us the evidence that sexual dysfunction is more common in type 1 diabetic women, but they have also provided for us their battery of questionnaires, which can be used as a tool to enable an understanding and treatment of the problem. Finally, we have our turn!

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