

EDITORIAL

Antihypertensive Drugs and Sexual Dysfunction

"A reasonable probability is the only certainty".
Edgar Watson Howe
Country Town Sayings (1911)

The origins of good clinical practice should lie in the results of well-designed basic science and clinical research. However, the conventional clinical wisdom is often based upon studies, or even case reports, which lack specificity, accuracy, reproducibility, or quantitative measures. Therefore, the common clinical "pearl" may be an erroneous and oversimplified idea. Data generated from this type of research are often subjective, vague, and lacking in scientific veracity. Certainly, such research doesn't yield anything even approaching a reasonable probability. Yet for generations of physicians, the clinical management of patients may be based upon these principles.

Well-organized basic science research takes a different approach. For example, well-designed psychophysiological research rarely deviates from basic principles established by the disciplines of biology, chemistry, physics, mathematics, and biophysics. The methodology usually is accurate, objective, and specific. Validity is viewed in the context of reliability and reproducibility. This type of research may well yield results that fall within the realm of a reasonable probability. Clearly, the scientific method, which is firmly established in the realm of basic science research, needs to be more generally applied to a clinical investigation and

ultimately should have a payoff in better clinical practices.

We have recently reviewed the literature concerning the relationship between antihypertensive drugs and sexual dysfunction. We were quite surprised to find that long-standing clinical beliefs about the sexual pathogenicity of widely used agents, such as methyl dopa and reserpine, were based upon clinical research that utilized flawed methodology. Specifically, we found underdeveloped research design with regard to assessment of sexual functioning and a lack of specificity in data collection. In general, thorough sexual histories were not taken, and few studies attempted to evaluate pretreatment sexual functioning. Few studies included A-B-A type research designs with placebo controls, which would confirm a specific drug effect. Many studies were done on fixed combinations of agents. Most studies reported their results in nonspecific terms such as "relative impotence" or "impaired ejaculation." These terms are not meaningful in the context of current clinical concepts of primary and secondary sexual dysfunctions such as organic and psychogenic erectile failure, premature ejaculation, and retarded ejaculation (1). Nonspecific descriptions as such do little to elucidate the pathophysiology of the effect, nor do they estimate probability of successful treatment outcome.

The study of sexual side effects of any pharmacologic agent requires particular

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expertise. Sexual history taking must include a thorough evaluation of pretreatment functioning. A-B-A placebo control is essential, and studies should focus on the effects of single agents on sexual functioning before fixed combinations are investigated. The effects of dosage, patient's age, and the chronicity of the illness must also be considered. The use of objective physiologic measures such as nocturnal penile tumescence (NPT) monitoring is absolutely indicated (2,3). More sophisticated assessments including sexual hormone levels, evaluation of the autonomic nervous system and Doppler studies of penile blood flow would add a further dimension to the investigation of any drug-related sexual dysfunction.

Lastly, we find it remarkable that there is a paucity of data concerning drug-related sexual dysfunctions in females. This is most disturbing in the case of antihypertensive drugs, since approximately 43% of hypertensives are female (4). It is unfortunate that this large and important population has completely escaped clinical and pathophysiological investigation.

It is our hope that improvements in methodology will more precisely elucidate the pathophysiology of antihypertensive drug-related sexual dysfunctions. Such improvements will come if scientists with expertise in both psychophysiology and clinical practice develop and organize appropriate investigations.

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