S19.04
PSYCHOPHARMACOLOGY AND PSYCHOTHERAPY AFFECT THE SAME BRAIN STRUCTURES

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The learned helplessness model of depression first described by Seligmann and co-workers shows both face validity, with changes in sleep, HPA axis function, libido, appetite and learning ability in helpless animals. The model also shows predictive validity in that treatments, which are effective in reversing depression in clinical situations, are also effective in reversing helplessness in animals. This makes learned helplessness a useful model to utilize in attempting to understand the common pathways of antidepressant action. Our studies have shown that with the development certain systems in the rat brain attain new set points. This is true of the NE system and is reflected in the upregulation of the β adrenergic receptor, the 5HT system where up regulation of the $5HT_{1b}$ receptor is one indication of altered function and in the HPA axis in which corticosterone is up regulated. Our current view is that for helplessness to result from exposure to uncontrolled aversive stimuli the modulating amine systems and HPA axis change their input to specific cells in the hippocampus and gene expression is altered leading to structural changes which result in long term changes in behavior. We wondered if treatment of the helplessness would result in a reversal of these pathological pathways and if there were common features to antidepressant action. Here we report on a variety of antidepressants, ECT and cognitive training as treatments to reverse helplessness. Using one measure of helplessness, elevated β receptors in the hippocampus, we can show that all the treatments which result in changing helpless behavior also result in a down regulation of the β receptor. This includes antidepressants thought not to act on the β receptor as well as psychological inputs such as cognitive training. When animals are allowed to recover over six weeks with no treatment there is also an excellent correlation between behavior and β receptor levels. Our data suggest that medication and psychological manipulation can both influence the same neurobiological systems.

S20. Treatment of sexual disorders and dysfunctions: from psychotherapy to psychopharmacology

Chairs: R. Balon (USA), Z. Zemishlany (IL)

S20.01
SEXUAL DISORDERS: DIAGNOSTIC AND EPIDEMIOLOGICAL ISSUES

R.T. Segraves. *Case Western Reserve University, Cleveland, Ohio, USA*

Studies of the prevalence of sexual disorders in the general population suggest that approximately 30–40% of the population complained of a sexual problem with the past 6 months. Among males, rapid ejaculation was the most common complaint. The second most common male complaint was erectile dysfunction, which triples in prevalence between ages 40 and 70. In females, hypoactive sexual desire disorder was the most common problem. There is considerable co-morbidity between sexual disorders and affective, anxiety, and substance abuse disorders. Patients with certain disease such as diabetes mellitus, multiple sclerosis, and renal failure has a high prevalence of sexual disorders. Damage to the genital autonomic nervous system innervation to the genitals by trauma, surgery, or radiation is associated with a high incidence of sexual disorders. Diagnostic evaluation centers on determining first if the problem is mainly psychogenic, mainly organic or mixed. Although variety of assessments such as cavernosography, nocturnal penile tumescence, somatosensory evoked potentials are available, the determination is usually made by a careful history. Organic problems usually are generalized to all situations, usually occur in the presence of a disease known to cause sexual problems, and have a gradual onset. The presence of turgid erections upon awakening are highly suggestive of a psychogenic etiology. If the problem is organic, one first wants to eliminate reversible factors such as drug-induced sexual dysfunction. Among psychiatric patients, one wants to certain that psychotropic agents have not caused the sexual problems as sexual dysfunction has been reported with antipsychotic, antidepressant, and antianxiety drugs.

S20.02
SEXUAL DYSFUNCTION AND PSYCHOPATHOLOGY IN THE ELDERLY

D. Aizenberg. *Geha Mental Health Center, Petah-Tikva, Israel*

Studies of sexual function in the elderly have reflected societal biases about sexual activity in older people. In recent years there is a growing interest in sexuality and sexual function in the elderly. In the following presentation several studies in healthy and psychiatric elderly patients will be reviewed.

An Israeli study (Weizman R 1987) in healthy elderly married men, had shown a decrease in coital activity and an increase in masturbation with age. About one third of the subjects reported on erectile dysfunction. Another Israeli study performed in urogenycological outpatient clinic (Aizenberg et al., IPA. 1997), compared sexual function of young vs. elderly female patients. Sexual activity was reported by more than half of the women above the age of 60. Sexaul dysfunction was more prevalent in the areas of desire, arousal and orgasm, but similar rates of satisfaction were reported for both groups.

In a small scale study, evaluation of sexual attitudes among elderly residents of old age home demonstrated that about two thirds of both men and women, expect an openly discussion of sexual matters. Subjects also expressed willingness to receive medical consultation and treatment for sexual dysfunction as needed (Aizenberg et al, IPA 1999). Finally the results of a recent study which compared sexual attitudes and function between healthy subjects and elderly schizophrenics will be presented.

It appears that there is a decline in sexual interest and activity with old age but sex is considered an important need for a significant proportion of the elderly subjects.

S20.03
PSYCHOLOGICAL ASPECTS OF SEXUAL DISORDERS

K. Segraves. *Case Western Reserve University, Cleveland, Ohio, USA*

Effective diagnosis and treatment of sexual disorders is often a challenging albeit a rewarding aspect of one's clinical practice. For many individuals, sexual functioning has a major influence on how a person experiences their sense of self and personal adequacy. Within a relationship, sexual behavior may be a major vehicle for the expression of intimacy and contribute significantly to the

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stability of the relationship. Thus, the identification of contributing and maintaining factors of sexual problems as well as designing effective interventions is a primary concern of clinical psychiatry. Academic and clinical training within the field of psychiatry, and psychology, prepares a professional to "listen" to verbal and nonverbal communications of patients. The therapist is trained to "see" repetitive patterns of behavior and to associate current and historical information, permitting a more dynamic understanding of sexual and interpersonal problems. These skills facilitate the diagnostic evaluation. While patients may seek a "quick" fix for sexual problems, clinical experience supports the hypothesis of the importance of psychosocial, affective, cognitive, interpersonal and cultural variables in maintaining or exacerbating problems regardless of etiology. These variables are often not amenable to a "quick fix." Historically, major shifts in how sexual problems have been viewed and treated, demonstrates how sexuality is shaped by social and cultural expectations, (e.g. 100 years ago a sexually enthusiastic woman would likely have been pathologized as a "nymphomaniac" and hospitalized for insanity). The renaming of sexual problems also relates to the shifting norms and biases of society (e.g. frigidity and inhibited sexual desire, have a different emphasis then the use of desire disorder; impotence is more negative then the current term erectile disorder). Today, as new and effective pharmaceutical agents increase treatment options for sexual disorders, therapists have the opportunity to develop new psychological interventions designed to incorporate and potentiate the drug therapies. This presentation will focus on the importance of differential diagnosis and careful sexual history prior to treating sexual problems. I will demonstrate how information derived from the assessment process is translated into efficient interventions. Another purpose of this presentation is to increase the therapists awareness and sensitivity to overt and covert messages communicated to the patient during the evaluation and treatment process.

S20.04
BIOLOGICAL TREATMENTS OF PARAPHILIAS AND PREMATURE EJACULATION

R. Balon. *Wayne Sate University, Detroit, Michigan, USA*

Pharmacotherapy of sexual dysfunction and sexual disorders is experiencing a renaissance. Even disorders which have been traditionally treated with various psychological and behavioral therapies, such as premature ejaculation (PE), and paraphilias, have reportedly been treated successfully with Pharmacotherapy. Premature ejaculation is the most prevalent type of sexual dysfunction among males with estimates of prevalence up to 40%. It is defined as persistent or recurrent ejaculation with minimal sexual stimulation before, on, or shortly after penetration and before the person wishes. The pause maneuver, pause-squeeze technique, and stop-start method have been standard treatments for PE for a long time. However, lately serotonergic antidepressants have emerged as an effective treatment for PE. Recent studies have demonstrated the efficacy and safety of clomipramine, fluoxetine, paroxetine, and sertraline in the treatment of PE. SSRI's seem to be the logical treatment of choice in cases of failed psychological treatment, when psychological treatments rejected, or the partner is unwilling to cooperate. The essential features of paraphilias are recurrent, intense sexually arousing fantasies and urges. Paraphilias have been described as impulse disorders, obsessive compulsive spectrum disorders, or affective spectrum disorders. Various hormones, antipsychotic drugs, lithium, buspirone and SSRI's, namely fluoxetine, have reportedly been successful in the treatment of paraphilias. This presentation will review the efficacy, management strategies, and advantages and disadvantages in the treatment of premature ejaculation with SSRIs, as well as in the treatment of paraphilias with various psychotropic drugs and hormones.

S20.05
TREATMENT OF SEXUAL DYSFUNCTION ASSOCIATED WITH MEDICATION

Z. Zemishlany. *Geha Mental Health Center, Petah Tikva, Tel Aviv University, Israel*

Many commonly prescribed psychiatric medications are associated with sexual dysfunction. Antipsychotics affect sexual function, probably via dopamine D_2 receptor blockade and/or hyperprolactinemia. Antipsychotic treatment interferes with desire, arousal (erection) and satisfaction. The prevalence of sexual dysfunction in treated schizophrenics is 30–60%. Even novel atypical antipsychotics seem to cause sexual dysfunction. Attempts to treat the sexual dysfunction using dopaminergic drugs were disappointing. The addition of L-dopa may increase psychotic states. Apomorphine causes severe nausea and is not sufficiently effective, and the addition of 100 mg/day amantadine caused some improvement but was not clinically satisfactory. L-deprenyl, 15 mg/day, had no effect on sexual dysfunction. Viagra (sildenafil citrate), which acts locally on the penis, may be a new and promising treatment and the results for the first few patients are encouraging. Antidepressant drugs, including SSRIs, also affect sexual function; estimates vary from a small percentage to 96%. The most common sexual side effects are delayed ejaculation and anorgasmia; center dot desire and arousal are also olden affected. The hypothesized mechanisms of action are increased serotonergic activity at the $5\text{-}HT_2$ receptor, anticholinergic effects and inhibition of NO synthetase. A variety of strategies have been used in the management of SSRI-induced sexual dysfunction: waiting for tolerance to develop, dosage reduction, drug holidays, substitution with another drug, and augmentation strategies. Substitute antidepressants are bupropion, nephazodone and mirtazapine. Adjustive agents are $5HT_2$ antagonists (cyprobertadine, mianserin, mirtazapine), dopamine receptor agonists (psychostimulants, bupropion) and Viagra. Benzodiazepines and lithium are also not devoid of sexual side effects. Impairment in sexual function and quality of life may lead to noncompliance and relapse. Therefore, new strategies to overcome these adverse effects are of great importance.

S21. Neurocognitive dysfunctions in subjects with psychotic disorders: methodological issues and clinical relevance

Chairs: S. Galderisi (I), J. Gruzelier (UK)

S21.01
COGNITIVE REHABILITAITON IN PSYCHIATRIC PATIENTS

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Cognitive abnormalities in schizophrenia appear early in the course of the illness and seem to be enduring characteristics. They include deficits in attention, learning, memory and executive function. Studies of high-risk, first degree relatives of patients with schizophrenia provided evidence, that mild cognitive dysfunction may

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