

Psychopharmacological Treatment of Sexual Dysfunction

American Society Clinical
Psychopharmacology

2005

Teaching Points

- 1. Sexual dysfunction is highly prevalent in the general population
- 2. Sexual dysfunction has a high prevalence in a number of psychiatric disorders
- 3. Some sexual dysfunctions can be treated psychopharmacologically

Outline

- Prevalance
- Treatment erectile dysfunction
- Treatment of rapid ejaculation
- Treatment of female arousal disorder
- Treatment of hypoactive sexual desire disorder

Pre-Lecture Exam

Question 1

- The most common male sexual dysfunction is:
 - 1.premature ejaculation
 - 2.hypoactive sexual desire disorder
 - 3.erectile dysfunction
 - 4.male orgasmic disorder

Question 2

- The most common female sexual dysfunction is:
 - 1.hypoactive sexual desire disorder
 - 2. female sexual arousal disorder
 - 3. female orgasmic disorder
 - 4.dyspareunia

Question 3

- Which drug is most effective in the treatment of rapid ejaculation?
 - 1. paroxetine
 - 2. sertraline
 - 3. fluvoxamine
 - 4. citalopram

Question 4

- Which drug has been shown to be effective in the delay of ejaculation when used on a PRN basis?
 - 1. citalopram
 - 2. fluoxetine
 - 3. fluvoxamine
 - 4. clomipramine

Question 5

- Low sexual desire is common in both men and women with major depressive disorder.
- True
- False

Prevalence: US population study

- Probability sample of US population aged 18 to 59
- 1410 men
- 1749 women
- Percentage indicating problem in past 12 months

Sexual dysfunction, US men

- Rapid ejaculation 28.5%
- Lack of interest 15.8%
- Erectile dysfunction 10.4 %
- Inability to orgasm 8.3%

Sexual Dysfunction, US women

- Lack of interest 33.4%
- Difficulty with orgasm 24.1%
- Trouble lubricating 18.8%

Global Study

- Sample of 27,500 people ages 40-80 from 29 countries
- Same questionnaire
- Different sampling and administration in different countries
- In Europe, used random digit dialing
- Response rate 16% for telephone

Frequency of sexual activity

- 80% of men and 65% of women had sex in previous year
- 44% men and 37% women had sex at least 5 times a month

Northern European, men

- Orgasm too quickly 20.6 %
- Erectile dysfunction 12.7 %
- Lack of interest 12.1 %
- Inability to orgasm 8.4 %

Southern Europe, men

- Orgasm too quickly 21.2 %
- Lack of interest 13.2 %
- Erectile dysfunction 13 %
- Inability to orgasm 12.2 %

Northern Europe, women

- Lack of interest 25.3 %
- Lack of lubrication 17.7 %
- Inability to orgasm 23.8%

Southern Europe, women

- Lack of interest 29.6 %
- Inability to orgasm 23.8 %
- Lack lubrication 15.5%

Correlates

- Depression related to increased risk of low desire and erectile dysfunction in men and to low desire in women
- Age correlated with increased risk of erectile dysfunction and trouble with lubrication

Sexual dysfunction, US women

- - Lack of interest 33.4%
 - Lack of orgasm 24.1%
 - Lack of lubrication 18.8%

Sexual Co-Morbidity

- Major depressive disorder
- Obsessive compulsive disorder
- Post traumatic stress disorder
- Anorexia nervosa
- Schizophrenia
- Social phobia
- Panic disorder

Lindal & Steffanson, SPPE, 1993; Wiederman et al, IJEP, 1996; Kennedy et al, JAP,1999, Kockett et al, JAD,1999; Minnen & Kampman, SRT,2000; Kivela & Palhala, IJSP,1988
Aisenberg et al, JCP, 1995; Aversa et al, IJA,1995; Bodinger et al, JCP,2002
Arsaray et al, JSMT,2001; Figueira et al, ASB. 2001

Sexual dysfunction in Depression

- Numerous studies have found decreased libido and erectile problems to be common in depression

Mathews & Weinmann , ASB, 1982

Sexual dysfunction and depression

- 134 patients with untreated depression
 - 40-50% decreased libido
 - 40-50% decreased arousal
 - 15-20% delayed orgasm

Kennedy et al, JAD, 1999

Treatment of Erectile Dysfunction

- Phosphodiesterase Inhibitors
 - Sildenafil (Viagra)
 - Tadalafil (Cialis)
 - Vardenafil (Levitra)

Wylie & Mac Innes, 2005

PDE-5 Inhibitors

- Cyclic guanosine mono-phosphate (cGMP) determines the extent of corporeal smooth muscle relaxation
- PDE-5 inhibitors block the breakdown of cGMP

PDE-5 Inhibitors

- The three available PDE-5 inhibitors have similar efficacy and side effects
- Tadalafil has a half-life of 17.5 hours whereas sildenafil and vardenafil have half-lives of around 4 hours

Common side effects

- Facial flushing
- Headache
- Dyspepsia
- Rhinitis
- Transient visual disturbances

Cautions

- PDE-5 inhibitors contraindicated if taking nitrates
- Use with caution in patients on multiple anti-hypertensive agents
- Rare risk priapism

Alternatives

- Intracavernosal alprostadil
- (Prostaglandin E-1)
- Intraurethral alprostadil
- Vacuum constriction devices

Treatment of Premature Ejaculation

Paroxetine*	20-40 mg daily
Clomipramine	10-50mg daily
Sertraline	50-100mg daily
Fluoxetine	20-40mg daily

*Strongest effect

On Demand Treatment

- Clomipramine 10-50mg 4-6 hours prior to coitus
- Data concerning on demand use paroxetine inconsistent

Treatment Female Sexual Dysfunction

- Alpha-blockers, topical alprostadil, oral phosphodiesterase inhibitors all increase peripheral vasocongestion but have no effect on reversing sexual dysfunction in women

Segraves, Exp Opin Emerging Drugs, 2003

Testosterone

- Numerous double-blind multi-site controlled studies have found that high dose testosterone therapy increases libido in postmenopausal women
- Long term safety of testosterone therapy is unknown

Androgen Insufficiency Syndrome

- Androgen levels drop precipitously after oophorectomy
- Androgen therapy increases libido in women post-oophorectomy
- Hypothesis that an androgen insufficiency syndrome may explain HSDD

Androgen Insufficiency Syndrome

- Limitations of androgen assays in females
- Much biologically active androgen in women is formed by intracellular conversion which is not detected by serum assays
- No measure of androgen is predictive of female sexual dysfunction

Bupropion

- One double-blind multi-site study of women with HSDD found that 4-6 weeks of bupropion 300-450mg per day increased orgasm completion and sexual satisfaction

Segraves, 2003

Conclusions

- A variety of psychopharmacological interventions are available to treat sexual disorders
- Numerous interventions are being investigated

Post Lecture Exam

Question 1

- The most common male sexual dysfunction is:
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- True
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Answers to Pre & Post Lecture Exams

1. 1
2. 1
3. 1
4. 4
5. True