Psychopharmacological Treatment of Sexual Dysfunction

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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
Pevalence: US population study

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

Laumann et al, JAMA, 1999
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

Laumann et al, IJIR, 2005
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

Sexual dysfunction in Depression

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

Methews & 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

Waldinger, 2005
On Demand Treatment

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

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The most common male sexual dysfunction is:

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Question 5

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

- True
- False
Answers to Pre & Post Lecture Exams

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