Sexual Dysfunction in HIV + Gay Men

Georgina Whelan

Psychologist, Sex Therapist & Registered Nurse

Australian Centre for Sexual Health

2-4/1A Berry Rd St Leonards

What is Sexual Dysfunction (SD)(1)

Sexual PSYCHOLOGY

- Disturbance of the psychophysiological changes that occur in the sexual response cycle
  - Desire
  - Arousal
  - Orgasm
- Causes marked distress or interpersonal difficulty

1. *DSM IV* (1994). American Psychiatric Association.

Definitions

- Erectile Dysfunction (ED)(1)
  - Persistent or recurrent inability to attain or maintain an erection till completion of sexual activity
- Hypoactive Sexual Desire (HSD)(1)
  - Persistent deficiency or absence of sexual fantasies and desire for sexual activity

1. *DSM-IV* (1994) . *American Psychiatric Association.*

Prevalence of SD in HIV + Gay Men

- Hong Kong: 42.5% report at least 1 SD for 3 months (1)
- France: 33% report at least 1 SD for 1 month (2)
- Europe: 32% ED and 24% Hypoactive Sexual Desire International Index of Erectile Function (IIEF) (3)

1. Lau et al. (2008). J Sex Med; 5: 27766-79.
2. Bounik et al (2008). *AIDS Behaviour; 12*:670-76.
3. Asboe (2007). *AIDS Care;19*(8) 955-65.

Sexual PSYCHOLOGY

Clinical studies of Sexual Dysfunction
Desire Loss 24-59% (1;5)
Erectile Dysfunction 13-74% (1-6)
Delayed Ejaculation 39-49% (1;2;8)
Loss of pleasure 31.8% (1)
Premature Ejaculation 11-20.1% (1;2)
Physical pain during intercourse 8-41% (1;7)

1. Mao et al. (2009). *J Sex Med; 6*: 1378-85.
2. Sandfort & Keizer (2001). *Ann Rev of Sex Research; 12*: 93-120.
3. Martin-Morals et al. (2001). *J Urology; 166*, 569-74.
4. Crum-Cianflone et al. (2007). *AIDS Patient Care STDS, 21*, 9-19.
5. Ende et al. (2006). *AIDS Patient Care STDS, 20*,75-8.
6. Asobe et al. (2007). *AIDS Care; 19*(8): 955-65.
7. Rosser et al. (1998). *Journal of Sex & Marital Therapy; 24*:281-292.
8. Jones et al. (1994). *AIDS Care;6*:587-593.

Sexual
PSYCHOLOGY

Why should we worry about SD in HIV + Gay Men?

Why should we worry about it?

- Sexual dysfunction reduces overall quality of life: (1)
  - Inhibits the expression of love and intimacy
  - Shame; embarrassment; low mood & low self-worth
- HIV + gay men with SD vs. no SD (2)
  - More fearful of sexual relations; sexually avoidant
  - Less sexually assertive & self-confident
  - Lower sexual self-esteem

1. Rosen (2007). *Principle & Practice of Sex Therapy*
2. Dupress & Morisset (1993). *Sexual & Marital Therapy; 8*: 37-46

Why should we worry about it?

- ED with condom use associated with UAI in HIV + gay men (1)
- ED more likely to have poor adherence to HAART (1)
- ED and low desire highly correlated with
  - Hypertension; Hypercholesterolemia (4;5)
  - Diabetes (4)
  - LUTS due to Benign Prostatic Hyperplasia (4)
- ED early marker for cardiovascular vascular disease (2;3)

1. Cove & Petrak (2004) *International Journal of STD & AIDS; 15,* 732-736
2. Thompson et al. (2005). *J of Amer Med Assoc; 294*: 2996-3002.
3. Rosen et al. (2005) *Urologic Clinics of Nth America; 32*: 403-417
4. Guay (2007) *Endocrinol Metab Clin North Am; 36*, 453-63.
5. Trotta, et al. (2008) *AIDS Patient Care STDS; 22*: 291-9

Sexual PSYCHOLOGY

Aetiology:

Usually a Mixture of Biological, Psychological & Sociological

Biological:

Aging; Pathophysiology & Medications

Age related changes to sexual function

- Age changes erectile function: (1)
  - Reduced frequency of morning erections
  - >35yrs need direct penile stimulation for erection
  - Delay in erection response
  - Reduction in firmness of erection >60yrs

- Decline in erotic dreams, thoughts & sexual activity (1;2)
- HIV + men likely to live longer with HAART (3)

1. Feldman et al (1994). *Journal of Urology; 151*:54-61.
2. Rosen (2005). *Lancet*, 366: 183-185.
3. Trotta et al (2008) *AIDS Patient Care;22*: 291-9.

Pathophysiology of HIV

- HIV is implicated in several system diseases that are strongly associated with ED and HSD:

1. Endocrine disease (1)
   - HIV effects Hypothalamic-Pituitary-Gonadal Axis = hypogonadism and HSD (2)
   - HIV hypogonadism reduces endothelial function increasing incidence of ED (1; 3; 4)

1. Crum-Cianflone et al. *AIDS Patient Care; 21*: 9-19.
2. Dobs et al. (1988) *Am J Med, 84*, 611-16.
3. Goldmeire et al. (2002) *Sex Transm Infect;78*: 64-6.
4.Roulet et al. (2006). *Am J Pathol; 169*: 2094-103.

Pathophysiology of HIV

2. Dyslipidemia, Lipodystrophy
   - HIV 1 & HAART (PI and NRTIs)
   - Impairs endothelial cells & smooth muscle of the penis required for vasodilation (1)
3. HIV Neuropathy
   - Viral toxicity and HAART (NRTI) (2)
   - Neuropathy damages peripheral nerves for erection = ED (3)

1. Dobs et al. (1988) *Am J Med; 84*: 611-16
2. Fleischer et al. (2004) *Clin Infec Dis; 28*: 79-80
3. Hamdan et al. (2009). *International Journal of Andrology; 32(2*):176-85.

Pathophysiology of HIV

- Untreated HIV 1 is associated with subclinical arteriosclerosis (1)

- T cells <200 associated with loss of interest in sex (2)

1. Wolf et al. (2002) *J Infect Dis; 185*(4) 456-62.
2. Cove & Petrak (2004) *International Journal of STD & AIDS; 15: 732-736*

HAART: ED and Low Desire

- Much debate on antiretroviral therapy & ED & low sexual desire
- Differences in findings are due to different: design, populations and definition of ED and low desire
- Probably HAART impacts adversely on ED & low desire (1)
  - Increased incidence of ED & low desire with duration of exposure to PI (2;3; 4)

1. Collazos et al. (2007). *AIDS Rev;* 9: 237-45.
2. Moreno-Perez et al. (2010). *AIDS; 24*:255-64.
3. Schrooten et al. (2001). *AIDS; 15*; 1019-23.
4. Colebunders et al. (2001). *Lancet; 353*:1802

HAART and ED and Low Desire

- Meta analysis HAART
  - Increased lipodystrophy 14-40% vs. 4% non treatment (1)
  - New-onset hyperlipidemia/ hypercholesterolemia 24%, hypertriglyceridemia, 19% and hyperglycemia 5% (1)
- HAART increases risk of diabetes mellitus, arteriosclerosis and cardiovascular disease (2;3).
- HAART increased estradiol levels and low sexual desire (4)

1. Waters & Nelson (2007) *Int J Clin Pract; 61*(6): 999-1014.
2. Glesby (2004). *PRN Note Book; 9*(2): www.prn.org
3. Hadigan et, al. (2001) *Clin Infect Dis 32*(1): 130-9.
4. Lamba et al. (2004). *Int J STDS AIDS;15*: 234-7.

Other Medications that cause SD

- Antidepressants: all types (1)
  - Loss of Libido 20%
  - ED approx 10%
  - Most common anorgasmia/delayed ejaculation 30-40%
- Antipsychotics: hyperprolactinemia (low desire/ED)
- Cardiovascular drugs
- Benzodiazepines (alprazolam) (2)
- Antihypertensives
- Anticonvulsants /mood stabilisers especially lithium (2)
- Antiandrogens

1. Segraves (2007). *Urol Clin North America;34*: 575-79.
2. Maurice (2007). *Principles & Practice of Sex Therapy*.: 181-122.

Sexual
PSYCHOLOGY

Psychological Factors Associated with ED and Low Sexual Desire

Psychology: Gay + Men & SD

- Initial HIV infection (1)
- Fear of infecting partner (2)
- Reinfection (3)
- Need to disclosure HIV status to partners (3)
- Partner doesn't want condoms (3)
- Internalised homophobia (<suburban/rural) (3; 4)
- Sex negative attitudes (3)
- Lack of sex information (3)

1. Obi et al. (2009). *Journal of Obs & Gyne; 29*(4): 329-32.
2. Cove & Petrak (2004). *International Journal of STD & AIDS; 15:* 732-736.
3. Klitzman et al. (2004). *Sex Res Soc Policy; 1*:38-57.
4. Ciesla & Roberts (2001). *Am J Psychiatry; 158*: 725-730.

Psychology: Gay Men & SD

Sexual PSYCHOLOGY

- Blame or punishment with HIV for promiscuity (4)
- Threat of performance failure (2)
- Threat of negative consequence (2)
- Lack of arousability due to sexual object preference or context (3;4)
- Past sexual trauma (4)
- Concurrent sexual dysfunction e.g. painful sex or delayed ejaculation (4)
- Body image related lipodystrophy (5)

1. Bancroft et al. (2005). *Archives of Sexual Behaviour; 34*(3): 285-97.
2. Rosen (2007). *Principles & Practice of Sex Therapy*: 277-310.
3. Maurice (2007). *Principles & Practice of Sex Therapy*: 181-212.
4. Nichols & Shernoff (2007). Principles and Practice of Sex Therapy: 379-416
5. Guaraldi et al. (2007). *Antivir Ther; 12*: 1059-65.

ED with Condom Use

- ED with condoms reported in gay & straight pop (4)
  - results in delayed or inconsistent condom use in HIV + gay men (1;2;3)
- Does not reduce sexual interest or frequency (3)
- Increased receptive anal intercourse (3; 5)

1. Calzavara et al. (2001). *Canadian Journal of Infectious Diseases, 12*(B): 61B.
2. Richters, et al. (2000). *International Journal of STD & AIDS;11:* 96-104.
3.Cove & Petrak (2004) *International Journal of STD & AIDS, 15, 732-736.*
4. Musaccho et al. (2006). *J of Adolescent Health;39*(3):452-4.
5. Adam et al. (2005). *The Journal of Sex Research; 42*(3): 238-248.

Reasons given for ED with Condom Use

- HIV or ARVs cause ED with condoms (1)
- Decreased sensation with condoms (2)
- Water based lubes cause dryness and abrasions with receptive anal sex (2): use silicon lubes
- Condom too tight or too large (2)
- More excited by sex without condoms (1)
- Greater dislike of condoms (1)
- Lose self in sex & not think about HIV (1)

1. Cove & Petrak (2004). *International Journal of STD & AIDS, 15, 732-736.*
2. Adam et al. (2005). *The Journal of Sex Research; 42*(3): 238-248.

Depression & SD in HIV + Gay men

- Depression is common in HIV + gay men (1)
- Depression strongly associated with ED and low desire in HIV + gay men (2; 3)
- ED and low desire prevalence 35-50 % of depressed pop (4)

1. Newman et al. (2009). *Family Practice; 26*(1):27-33.
2.Jefferies, et al. (2009). *Sexual Health; 6*:285-92.
3. Rodgers, et, al. (2003). *HIV Med; 4:* 271-275.
4. Ciesla & Roberts (2001). *Am J Psychiatry; 158:* 725-730.

Sexual
PSYCHOLOGY

Sociological Factors Associated with ED and Low Sexual Desire

Sociology: SD in HIV + Gay Men

- Socially stigmatised self: perception that HIV + men should not be having sex
  - Lack of sexual scripts (1)
  - Lack of comfort negotiating sexual safety (1;2)
- Lack of social & institutional support of gay relationships
  - makes it harder to establish and maintain relationships (3)

1. Sandfort & Keizer (2001). *Ann Review Sex Research;12*: 93-120.
2. Schernof (2006). *Without Condoms: Unprotected sex gay men and bare backing.*
3. Shidlo (1994). *Lesbian and Gay Psychology: Theory Research and Application.*

Sociology: SD in HIV + Gay Men

- Partner conflict regarding fidelity (1)
- Partner sexual dysfunction
  - No studies on HIV + Gay
  - High prevalence in heterosexual studies (2)
  - Low desire is often desire discrepancy (2)
- Poverty associated with high rates of SD (3;4)

1. Nichols & Shernoff (2007). *Principles and Practice of Sex Therapy:* 379-416.
2. Rosen (2007). *Principle & Practice of Sex Therapy* :277-311.
3. Cove & Petrak (2004). *International Journal of STD & AIDS; 15: 732-736*
4 . Lauman et al. (1994). *The Social Organisation of Sexuality: Sexual Pract. in USA*

Sexual PSYCHOLOGY

Life Style Factors Associated with ED & Low Sexual Desire

Lifestyle factors: SD

- Substance abuse
  - Marijuana, opiates, cocaine & amphetamines reduce gonadotropin production in men causing low sexual desire and ED (1)
  - Alcohol abuse associated with ED and HSD (2)
- Smoking independently increases incidence of ED (3)
- Exercise x 3/wk decrease ED risk 30% (4)

1. Wisniewski, et al. (2007). *Gender Medicine, 4*(1): 35-44.
2. Schweitzer et al.(2009). *Aust NZ Journal of Psychiatry; 43*(9): 795-808.
3. Jaing He (2007). *American Journal of Epidemiology; 166*(7): 803-809.
4. Bacon et al. (2003). *Annals of Internal Medicine; 139*(3): 161-168.

Treatment:

Combined Medical & Psychological Approach

Start with a Sexual History

- Duration: Life Long or Acquired
  - When did the problem first occur?
  - Did sexual difficulty start soon after starting a particular drug?
- Context: Generalised or Situational
  - Can he get an erection during masturbation?
  - Does he have desire to masturbate but not have sex with others?
- Past sexual & relationship experience

Get into the details

- Desire (fantasies; thoughts; urges; interest)
- Frequency of sex and changes in frequency
- Arousal (quality of erection; attain; maintain; intromission)
- Ejaculation/orgasm
- His & partners reaction first time: expected reaction
- Past trauma, shame, guilt or coercion
- Mental health & D&A assessment

Expectations of treatment

- What are client's expectations of treatment?
  - Return to previous function: spontaneity; rigidity
  - Passion/desire?
  - Is this achievable?
- Re-evaluate: what do I want my sex life to be like?
- Unlike ED, low desire is not a disease rather it is a symptom of poor health.
- Low sexual desire has poor outcomes (1)

1. Maurice (2007). *Principle and Practice of Sex Therapy*: 181-211.

Treatment for ED and low desire

- Good enough sex: (1)
  - Realistic: you are not 20 any more
  - Arousal is impacted upon by fatigue, mental wellbeing & chronic illness
  - Playful rather than perfect
  - Emphasis on pleasure/intimacy/satisfaction rather than performance
  - Difficult for men for whom sexual performance assumes a large part of their personal identity

1. Metz & McCarthy (2004). Coping with erectile dysfunction

Sexual
PSYCHOLOGY

Medications for ED

Medications for ED

Sexual PSYCHOLOGY

- All 3 PDE-5 inhibitors are highly effective (92-89%) (1)
  - Improve erection (2)
  - Improve orgasm, satisfaction & QOL (2)
  - Improve depression & self-confidence (4)
- Aprostadil Injection 2nd line therapy highly effective (72%) (5) :
  - 2 sessions on correct injecting technique (6)

1. Steers et al. (2001) *Int J Impot Res;* 13: 261-267.
2. Donatucci et al. (2004) *Journal of Sex Med; 1*:185-192.
3. Hatzichristou (2005). *Journal of Sex Med; 2*: 109-116.
4. Brock et al. (2002) *Journal of Urology; 168*(4pt.2)1332-36.
5. Porst (1996). *J Urol; 155(3*): 802-15.
6. Aiemo (2003). *J of Urol; 170*: 2356-58.

PDE-5 Treatment for ED

Sexual PSYCHOLOGY

- PDE-5 efficacy dependent on control of comorbid diseases:
  - Diabetes (1)
  - Hypertension (1)
  - Hypercholesterolemia (2)
  - Hypogonadism (3)
  - Depression (4)
  - Excessive anxiety (5)
  - Excessive venous out flow (5)

1. Cartledge et al. (1999). *Eur Urol; 35*(suppl.2); 100, Abstr. 399.
2. Saltzman et al.(2004) J Urol; 172: 255-258.
3. Aversa et al.(2003) *Clin Endocrinol; 58*: 632-638.
4. Brink (2008*). Journal of Neural Transmission; 115*(1):117-25.
5. Virag (2005). *J of Sex Medicine; 2*: 289-290.

PDE-5 Treatment for ED

Sexual PSYCHOLOGY

- Drop out rate for PDE-5 is high 40-80% (1)
- Salvage up to 60% with counselling about Rx: (2)
  - Sildenafil and Vardenafil fasting 2 hours prior
  - Tadalafil wait up to 2 hours b4 sex
  - Use highest dose consistently
  - Provide sufficient stimulation
- Change to another PDE-5 after 4 tablets; 4 occasions with optimal stimulation (3)

1. Rosen (2007). *Principles & Practice of Sex Therapy*: 277-312
2. Aiemo (2003). *J of Urol; 170*: 2356-58
3. Porst & Buvat (2007). *Standard Practices in Sexual Medicine*: p86

Daily Dosing of PDE-5

- Daily dosing is recommended for those with several cardiovascular risk factors (1)
  - Improves endothelium function in cavernous bodies and throughout whole vascular system (2)
  - Speculated long-term beneficial effects on whole vascular system & voiding difficulties with benign prostatic hyperplasia (3)
- Daily dosing for several months rescues 50% of Rx failures (1)

1. McMahon (2004). *J Sex Med; 1*: 292-300.
2. Rosano et al. (2005). *Eur Urol; 47*: 214-222.
3. Porst & Buvat (2007). *Standard Practices in Sexual Medicine*: p86.

Note of Caution with PDE-5 use in HIV + Gay men

- PI increase plasma levels and clinical effects of all PDE-5 inhibitors (1)
- PDE-5 increased risk of HIV seroconversion in drug using populations: (2)
  - Increased UPAI (2)
  - Increased condom breakage (3)
  - Increased anal vasodilation and facility of transfer (3)

1. Sekar et al. (2008). *Clinical Drug Investigation; 28*(8): 479-85.
2. Ostrow et al. (2009). *J Aquir Immune Defic Sndrm; 51*(3): 349-55
3. Rosen et al. (2006). J Sex Med; 3: 960-75: discussion 73-75.
4. Milman & Arnold (2002). Ann Pharmacotherapy; 36:1129-342.

Psychological Treatment

Psychological Treatment for ED & Low Desire

- Individual or couples:
  - Psychosexual education on aging; ED & desire
  - Cognitive Behavioural Therapy
  - Sexual Permission: validation of sexual identity & behaviour (1)
  - Communication training
  - Assertiveness practice
  - Negotiated safety agreement questionnaire (1)

1. Nichols & Shernof (2007). *Principles & Practice Sex Therapy*

Psychological Treatment for ED and Low Desire

- Promoting sexual self-efficacy (reduced by SD; HIV & Rx)
- Non-demand pleasuring
- Physical awareness and sensuality exercises
- Reduction of sexual inhibitors
- Desensitisation for sexual/relationship avoidance
- Exploration of past negative or traumatic events

Psychological Treatment for ED and Low Desire

- Treatment of psychiatric co-morbidities: depression; anxiety disorders; substance use
- Intimacy building (emotional/sexual)

Summary

- SD in HIV + Gay men is highly prevalent and related to a multitude of factors
- Combined medical and psychosocial treatment approach is required
- More research is needed into HIV + gay populations:
  - PDE-5 efficacy in HIV
  - Efficacy of combined treatments for specific types of sexual dysfunctions

Sexual Health Inventory for Men (SHIM) for ED (1)

1. How do you rate your confidence that you could get an erection?
2. When you had erections with sex sexual stimulation, how often were your erections hard enough for penetration?
3. During sexual intercourse, how often were you able to maintain your erection after you had penetrated (entered) your partner?
4. During sexual intercourse how difficult was it to maintain your erection to completion of intercourse?
5. When you attempted sexual intercourse, how often was it satisfactory to you?

- Likert scale 1= least functional to 5= most functional
- 22-25 Normal erectile function;
- 17-21 Mild ED
- 12-16 Mild to Moderate ED
- 8-11 Moderate ED
- <7 Sever ED

1. Rosen et al. (1999). *Int J Impot Res; 11*: 319-26