

Clinical education:

Herpes Simplex Virus (HSV)

Dr Melanie Bissessor, March 2021



MSHC

MELBOURNE SEXUAL HEALTH CENTRE

Part of **AlfredHealth**



Program outline

- Overview of genital herpes (GH)
 - Epidemiology
 - Clinical presentation
 - Viral shedding & transmission
- Diagnosis
- Treatment approaches
- Case studies



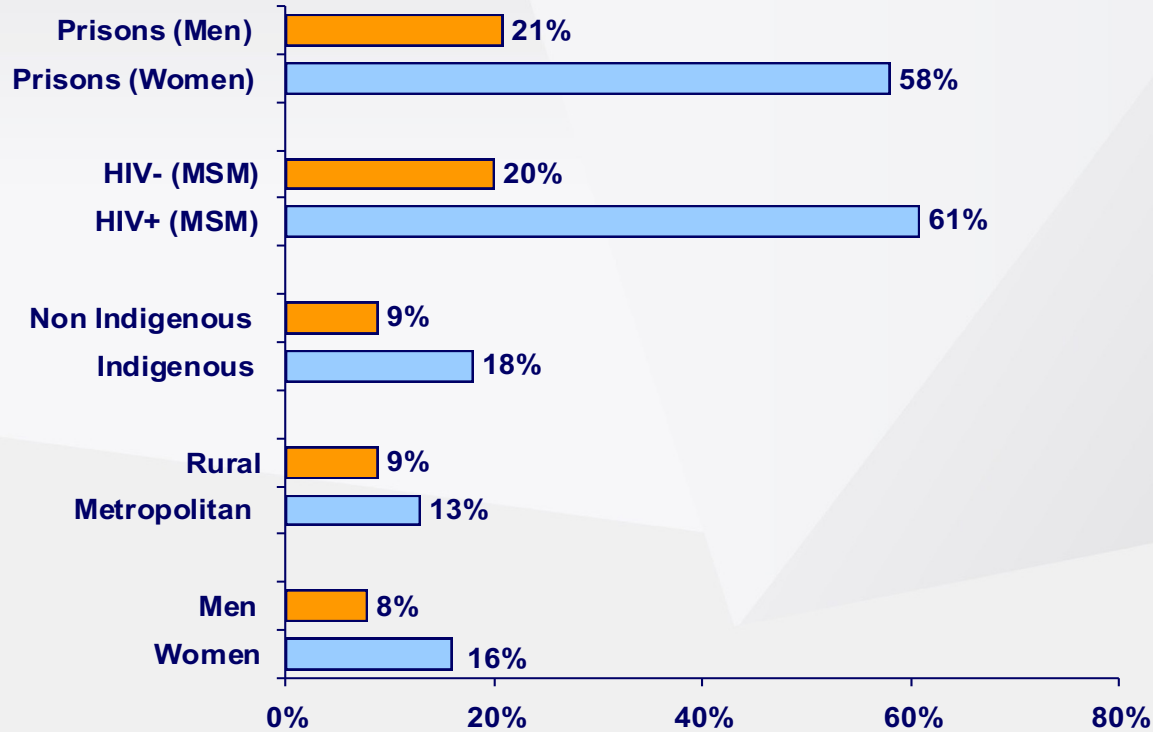
Genital herpes

- GH can result from infection with either HSV-1 or HSV-2
 - HSV-1 and HSV-2 lesions are clinically indistinguishable
 - increase in genital HSV-1
 - 15.8% in 1980 to 34.9% in 2003 ¹
 - > 50% of first episodes in young heterosexual women and men who have sex with men (MSM)²
 - Oral sex is commonly the initial sexual contact with young people
 - HSV-2 continues to be the most common cause of recurrent_GH

1. Tran T et al. Sex Transm Infect 2004; 80: 277-279 2. Ryder N et al. Sex Transm Infect 2009 Mar 8. [Epub ahead of print]



Prevalence of HSV-2 in Australia



1. Cunningham AL et al. *Sex Transm Infect* 2006; 82: 164-168. 2. Cunningham AL et al. *Med J Aust* 1993;158 (8): 528-528 3. Bassett I et al. *Med J Aust* 1994; 160(11): 697-700. 4. Russell DB et al. *J Clin Virol* 2001;22(3):305-313. 5. Butler T et al. *Int J STD AIDS* 2000; 11(11); 743-7



Symptoms of GH

- ‘Classical’ signs of blisters or ulcers are uncommon
- ‘Atypical’ manifestations are more common and include ¹⁻⁴
 - subtle, often painless ulcers
 - perianal, scrotal or vulvar fissures
 - dysuria
 - urethral and vaginal discharge
 - vulvar irritation
 - localised erythema
 - back pain without lesions
 - redness or irritation of the skin
 - itchiness, tingling or soreness

1. Corey *et al.* *Ann Intern Med* 1983; 98(6): 958–72. 2. Langenberg *et al.* *N Engl J Med* 1999; 341(19): 1432–8.
3. Koutsky *et al.* *N Engl J Med* 1992; 326(23): 1533–9. 4. Ashley RL, Wald A. *Clin Microbiol Rev* 1999; 12(1): 1–8.



HSV lesions in an immunocompromised patient



Can present along the dermatome



Vulval fissure rather than ulcer



Primary versus recurrent disease

- **Primary 1st episode**
 - Lesions appear 2-14 days after exposure and without therapy can last 20+ days
 - Manifestations typically include
 - bilateral lesions, itching, dysuria, vaginal or urethral discharge, fever, headache, or fatigue
 - regional symptoms include parasthesiae and paresis
- **Recurrent episode**
 - Usually unilateral lesions
 - Fewer and shorter symptoms (<7 days)
 - Occasional neuropsychiatric symptoms



Severe vulval primary



recurrent lesion



HSV-2 recurrence

- 89% of individuals with symptomatic HSV-2 will experience recurrences¹
- Median of 4-6 recurrences in the first year following newly acquired HSV-2^{1,2}
- Patients who experience a severe primary HSV-2 infection may have twice as many recurrences in the first year¹
- HSV-2 several times more recurrent than HSV-1²

1. Benedetti J et al. Ann Intern Med 1994; 121: 847-854. 2. Benedetti J et al. Ann Intern Med 1999; 131: 14-20



Asymptomatic viral shedding

- Rates for HSV reactivation and shedding are highest in the first year and stabilise over time
- Titre of HSV DNA shed in the absence of lesions can be as high as the titre shed when lesions are present¹
- Rates of sub-clinical shedding of HSV in patients with no reported history of GH is similar to that in subjects with such a history²
- Transmission mainly occurs during periods of asymptomatic shedding ³

1. Wald *et al.* *J Clin Invest* 1997; 99: 1092–7 2. Wald A *et al.* *NEJM* 2000; 342(12): 844–850 3. Mertz *et al.* *Ann Intern Med* 1992; 116: 197–202



Risk Factors for transmission of HSV-2

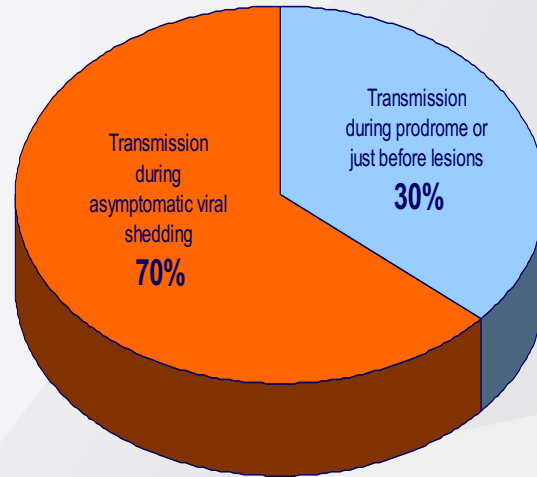
- gender: M→F higher than F→M
- duration of infection
- length of relationship
- number of recurrences
- number of sexual contacts per month
- immune status – source partner/susceptible partner
- no condom use
- engaging in sexual activity whilst symptoms present
- other STI infections

1. AHMF Guidelines for Clinicians, Reducing Sexual Transmission of Genital Herpes, Revised February 2008
2. AHMF Genital Herpes: Essential Facts



Who transmits genital herpes

- Most HSV-2 infections are acquired from a person with no history of GH¹
- In HSV-2-positive individuals who have a history of recurrent GH, most transmissions occur when lesions are not present²



1. Mertz et al. Sex Transm Dis 1985; 12: 33–9 2. Mertz et al. Ann Intern Med 1992; 116: 197–202.



Reducing transmission risk

- Disclosure to partners
- Partner status
- Abstaining when symptoms are present
- Use of condoms
- Use of antiviral therapy

1. IHMF Managing Genital Herpes 2. AHMF Guidelines for Clinicians,
Reducing Sexual Transmission of Genital Herpes, Revised February 2008
2. AHMF Genital Herpes: Essential Facts



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HSV transmission and condoms

- Condoms have been shown to reduce the transmission of GH^{1,2}
 - More effective in prevention of transmission from male to female ¹
- Latex and polyurethane condoms are almost completely impermeable to HSV³

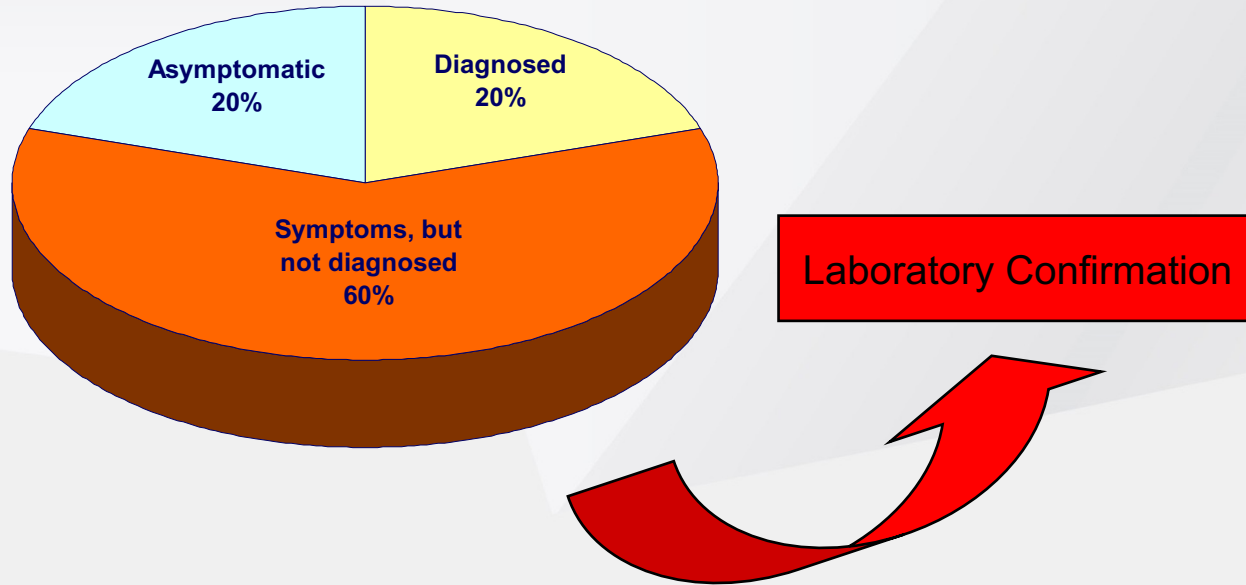
BUT

- Viral shedding occurs from areas not covered by condoms
- Issues of correct and consistent use
- Condom failures (breakage/ slippage) can still occur

1.Wald A et al. JAMA 2001; 285: 3100-6 2.Wald et al. Ann Intern Med 2005;143:707-13 3. Lytle CD et al. Sex Transm Dis 1997; 24: 161-4.



Undiagnosed GH infection



Diagnostic tests

PCR*	Virus Culture	Direct Antigen Detection
More rapid than other tests	Slow	Fast
More sensitive than other detection methods late in infection when lesions have begun to crust	High sensitivity; > 90% from lesions BUT Sensitivity falls as lesions heal	Least sensitive Sensitivity falls as lesions heal
Controls for cross contamination important	100% specificity	High specificity

* PCR is now considered the diagnostic standard of care



Type-specific serology

The place for serology in diagnosis

- Circumstances where type specific serology useful:
 - Relationships where one partner has genital herpes and the other is asymptomatic¹
 - First episode genital herpes during pregnancy²
 - To determine duration of infection

1. The Use of Type-Specific Serology for the Diagnosis of genital Herpes, AHMF Guidelines for Clinicians, Revised February 2008

2. Herpes Simplex in Pregnancy, AHMF Guidelines for Clinicians, Revised and Updated July 04



Type-specific serology

Limitations

- Tests vary in their reliability and reproducibility
- A positive test only indicates a person has been infected
 - Positive tests do not identify the site of infection
 - Positive tests cannot prove that a genital lesion is due to HSV infection
 - Positive HSV tests cannot distinguish genital from orofacial HSV1 infection
- Current ELISAs may fail to detect HSV-2 antibodies in patients who have longstanding infection

1. Ashley RL. *Herpes* 2002;9(2):38-45. 2. Mindel A, Taylor J. *Herpes* 2002;9(2):35-7. 3. Patrick DM, Money D. *Herpes* 2002;9(2):32-4. 4. ahmf.com.au



Serological tests

HSV IgG antibody tests

- Sensitivity (for established infections) ranges between 88% and 100%
- Specificity ranges between 86% and 98%
- In a low-risk (3%) population, the positive predictive value could be as low as 60%



Serological tests

Western Blot

- Reasonably reliably distinguishes between HSV-1 and HSV-2 infections¹
- Limitations:²
 - Technically difficult and time consuming
 - Very limited availability (mostly used in research setting)
 - Expensive
 - If early infection is suspected, may need repeating after 4-6 weeks to look for evolving profile
 - May not be definitive for 12 weeks after infection

1. Ashley RL et al. J Clin Microbiology 1988;26(4):662-7; 2. ahmf.com.au



Psychosocial and psychological morbidity of GH

A range of emotional responses have been described in individuals with GH which include depression, anguish, distress, anger, diminution of self-esteem and hostility towards the person believed to be the source of infection ¹⁻³

- Psychological morbidity associated with GH needs to be addressed equally when managing patients with GH

1. Mindel A. Scand J Infect Dis Suppl 1996; 100: 27-32; 2. Australian Herpes Management Forum. Counselling and communication skills for patients with genital herpes, 2004; 3. Melville J, Sniffen S, Crosby R et al. Sex Transm Infect 2003; 79: 280-5.



Emotional reaction to the diagnosis of GH



Catotti DN et al. Sex Transm Dis 1993; 20(2): 77–80



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Concerns of patients and their partners

- Concerns about transmission ^{1,2}
 - One of the biggest worries for 73% of patients with GH is passing the virus on¹
 - Transmission of GH to a sexual partner or infant is major concern of patients with GH ^{1,2}
 - Acquiring GH is a great concern of susceptible sexual partners
- Managing symptoms of recurrent disease
 - How to reduce the number of outbreaks³

1. Alexander L and Naisbett B. J Infect Dis 2002; 186 (Suppl 1): S57-65 2. Handsfield HH. Curr Infect Dis Rep 2000; 2: 25–30
3. Patrick DM et al. Sex Transm Inf 2004; 80: 192-197



Common questions

- How did I get it; has my partner been unfaithful?
- Should I tell all my future partners and when?
- Will it affect my fertility?
- What if I (my partner) get pregnant?
- How many recurrences will I get?
- What can I do to stop recurrences?
- Can I catch it from toilet seats/ towels etc?
- Does the medication have long term side effects?
- Can it spread from my genitals to other parts of my body?
- What can I expect in the future?
- I've heard GH causes cancer. Is that true?
- Can I have a blood test for GH?

1. AHMF Myths about Genital Herpes



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Treatment strategies

- Initial Episode
- Episodic Therapy
 - Standard course
 - Short course
- Suppressive Therapy
 - Continuous
 - Pre-emptive

1. AHMF Guidelines for Clinicians, Managing Genital Herpes, Revised February 2008 2. IHMF Guidelines



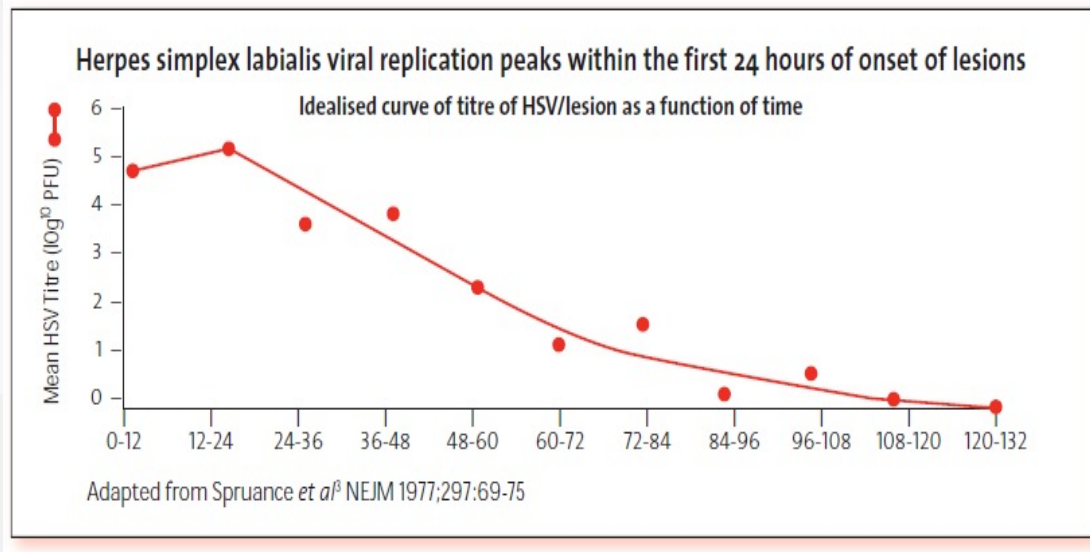
Management of an initial episode

- Take a complete sexual history, perform genital examination and STI screen as indicated
- Swab lesion(s) for HSV PCR (not serology)
 - Best chance of confirming and typing lesions is at initial episode
 - Results more accurate when lesions are fresh
 - Accuracy drops as lesions crust, so a repeat test may be required
- Don't delay → start treatment on clinical suspicion ^{1,2,3}

1. Pharmaceutical Benefits Schedule, effective 1 May, 2009. 2. AHMF Guidelines for Clinicians, Managing Genital Herpes, Revised February 2008
3. AHMF Guidelines for Clinicians, The Diagnosis of Herpes Simplex Viruses, Updated February 2008



Episodic herpes



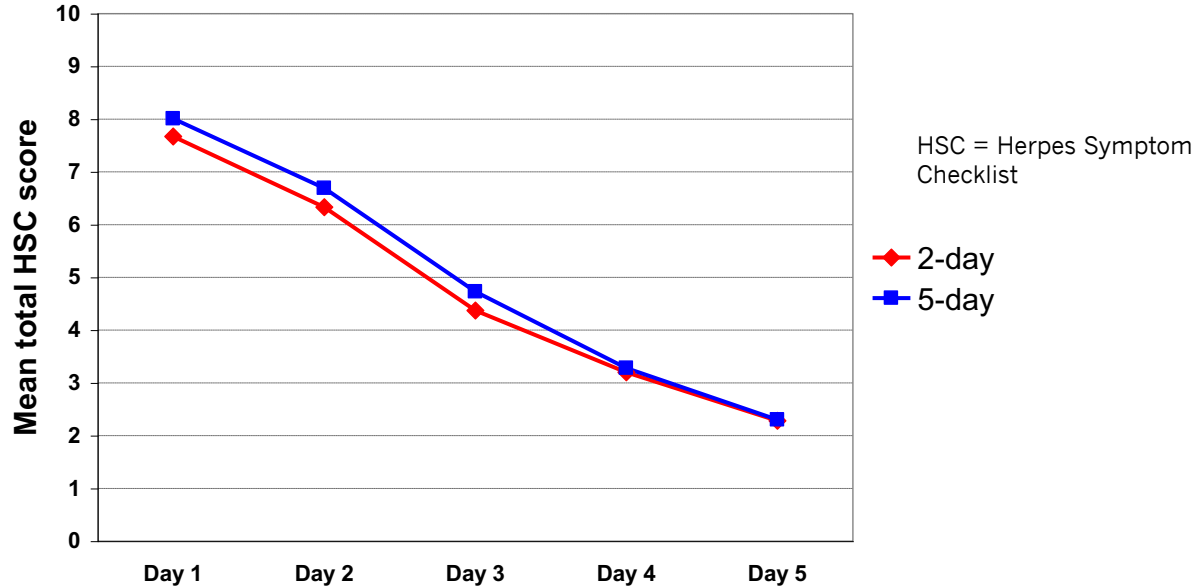
Episodic therapy

- Aim of episodic therapy is to reduce the duration and severity of a recurrence
- Placebo controlled studies have shown that:¹⁻³
 - 5 days of antivirals are effective at reducing:
 - Episode duration (by 1-2 days)
 - Pain (by up to 1 day)
 - Formation of new lesions
 - Extremely wide-ranging results due to variation in definitions, inclusion criteria, complexity of follow up
- Twice as likely to abort episode if therapy is started ≤ 6 hrs of symptoms/signs⁴
- Advise patient to carry medications with them

1. Spruance SL et al. Arch Intern Med 1996; 156(15): 1729-35 2. Sacks SL et al. JAMA 1996;276(1):44-9 3. Sacks SL et al. Clin Infect Dis 2005; 41(8): 1097-104 4. Strand A et al. Sex Transm Infect 2002; 78: 435-439



Symptom severity reduces from baseline, and there is no significant difference between the treatments – Fast Study



Mean of total scores over the treatment period (Day 1 to 5)

	N	mean	p-value
2-day	489	4.77	0.40
5-day	492	4.98	



Short course episodic regimens

- Rationale of short course regimens
 - In recurrences, viral replication reaches its peak within the first 24-48 hours of the onset of symptoms¹
 - Viral replication is usually terminated within 2 days of commencing anti-viral therapy¹
- A number of studies have assessed the efficacy of short course therapy²⁻⁷
 - Impact on healing, virological markers (shedding) and lesion abortion of short course therapy is equivalent to standard 5 day therapy
- Currently, famciclovir is the only antiviral approved for use in a short course (2-day) episodic regimen for GH (PBS listed April 2008)

1. Corey L. *Sex Transm Dis.* 1994; 21: 38-44 2. Bodsworth N et al. *Sexual Health* 2008 Sep; 5(3): 219-25 3. Aoki FY et al. *Clin Infect Dis* 2006; 42: 8-13
4. Strand A et al. *Sex Transm Infect* 2002; 78: 435-439 5. Leone PA et al. *Clin Infect Dis* 2002; 34: 958-962 6. Bodsworth N et al. *Curr Med Research* 2009; 25(2): 483-487 7. Bavaro JB et al. *Sex Transm Dis* 2008; 35(4): 383-6



Episodic therapy

Who would benefit?

- Episodic therapy could be considered when:
 - Transmission is not a major concern
 - The patient is not overly concerned about recurrences
 - Recurrences are relatively infrequent, well defined and severe
 - The patient gets clear prodromal symptoms
 - If patients do not want to take daily, ongoing medication

1. AHMF Guidelines for Clinicians, Managing Genital Herpes, Revised February 2008 2. AHMF Guidelines for Clinicians, Suppressive Therapy for Genital Herpes, First Edition April 2008 3. AHMF Guidelines for Clinicians, Herpes Simplex in Pregnancy, Revised & Updated July 2004



Suppressive therapy

- Benefits of daily antiviral suppressive therapy
 - Reduces recurrences ¹⁻³
 - Reduces viral shedding ³⁻⁵
 - Reduces risk of transmission (shown for valaciclovir only) ⁶
 - Improves quality of life ⁷⁻⁹
 - Is preferred by some patients ^{7*}
 - Useful adjunct to counseling

* In an open-label, randomised, cross-over 48-week study comparing Valtrex OD suppressive therapy versus Valtrex BD episodic therapy, n=202; p<0.001

1. Patel R et al. *Genitourin Med* 1997;73:105-109 2. Diaz-Mitoma F et al. *JAMA* 1998; 280(10): 887-892 3. Wald A et al. *Sex Transm Dis* 2006 Sep; 33(9): 529-33 4. Wald A et al. *J Clin Invest* 1997; 99: 1092-1097 5. Sperling RS et al. *Sex Transm Dis* 2008; 35(3): 286-290 6. Corey L et al. *N Engl J Med*. 2004 Jan 1;350(1):11-20. 7. Romanowski B et al. *Sex Transm Dis* 2003; 30(3): 226-31 8. Handsfield HH et al. *Sex Transm Dis* 2007; 34(6): 339-343 9. Patel R et al. *Sex Transm Inf* 1999; 75(6): 398-402 10. AHMF Guidelines for Clinicians, Suppressive Therapy for Genital Herpes, First Edition April 2008



Suppressive therapy

Consider in:

- Patient groups at high risk of HSV transmission
- Patients in new relationships
- Newly-diagnosed patients (recurrence rate highest in first year)
- Patients with frequent recurrences
- Patients with more severe symptoms
- Patients not coping well psychologically with the diagnosis
- Partners of seronegative pregnant women (or those contemplating pregnancy)

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Suppressive therapy

Recurrence reduction

- Suppressive therapy significantly increases time to first genital HSV recurrence and allows more patients to be recurrence free^{1,2}
- In a comparative efficacy study of valaciclovir and famciclovir³:
 - No statistically significant difference was observed for the primary endpoint, proportion of persons with a clinically confirmed recurrence
 - Analyses of secondary endpoint, proportion of persons with a virologically confirmed recurrence, showed a statistically significant benefit for persons randomised to valaciclovir (p=0.035)
 - Time to virologically confirmed recurrence shorter with famciclovir (p=0.049)

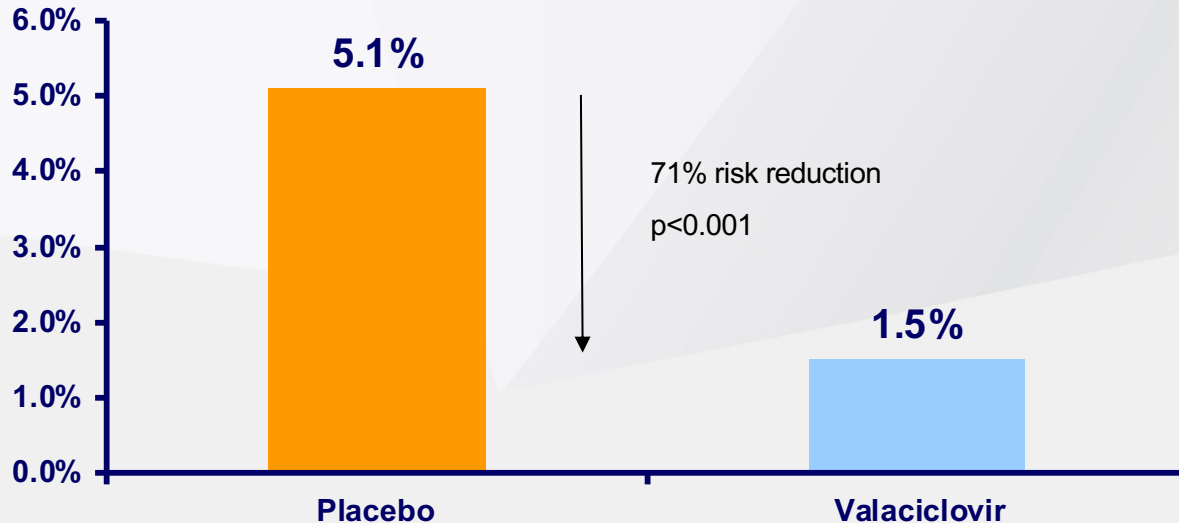
1. Patel R et al. *Genitourin Med* 1997;73:105-109
2. Diaz-Mitoma F et al. *JAMA* 1998; 280(10): 887-892
3. Wald A et al. *Sex Transm Dis* 2006 Sep; 33(9): 529-33



Suppressive therapy (valaciclovir)

Viral shedding reduction

Percent of subclinical days with HSV-2 shedding



Pre-emptive suppressive therapy

- Pre-emptive suppressive therapy
 - Tactical use of suppressive therapy over short period of time
 - Helpful during periods when patients wish to reduce the risk of an outbreak
- Social examples that may warrant pre-emptive suppressive therapy:
 - To prevent a recurrence leading up to a special occasion
 - To decrease viral load and reduce transmission risk when entering into a new relationship
- Pre-emptive suppressive therapy is a common patient choice



Once daily valaciclovir suppressive therapy

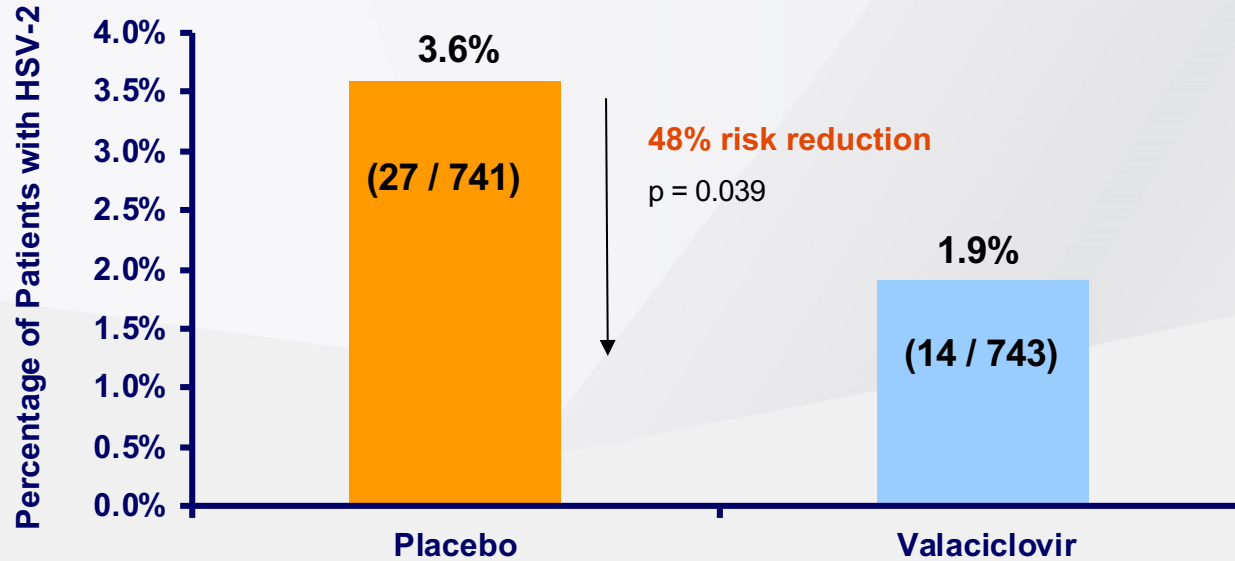
Transmission reduction study

- 1484 heterosexual couples in a monogamous relationship (median 2yrs)
- Source partners
 - HSV-2 positive; history of recurrent GH (< 10 recurrences/year)
 - Randomised 1:1 to valaciclovir 500 mg once daily (n=743) or placebo (n=741) for 8 months
- Susceptible partners
 - HSV-2 negative (HSV-1 positive or negative)
 - monitored for clinical and subclinical acquisition of HSV-2 (serology, PCR, culture)
- Couples counselled on safer sex behaviour (abstinence during symptomatic episodes, condom use)



Proportion of susceptible partners with HSV-2 infection

Primary endpoint



Once daily valaciclovir suppressive therapy

Transmission reduction

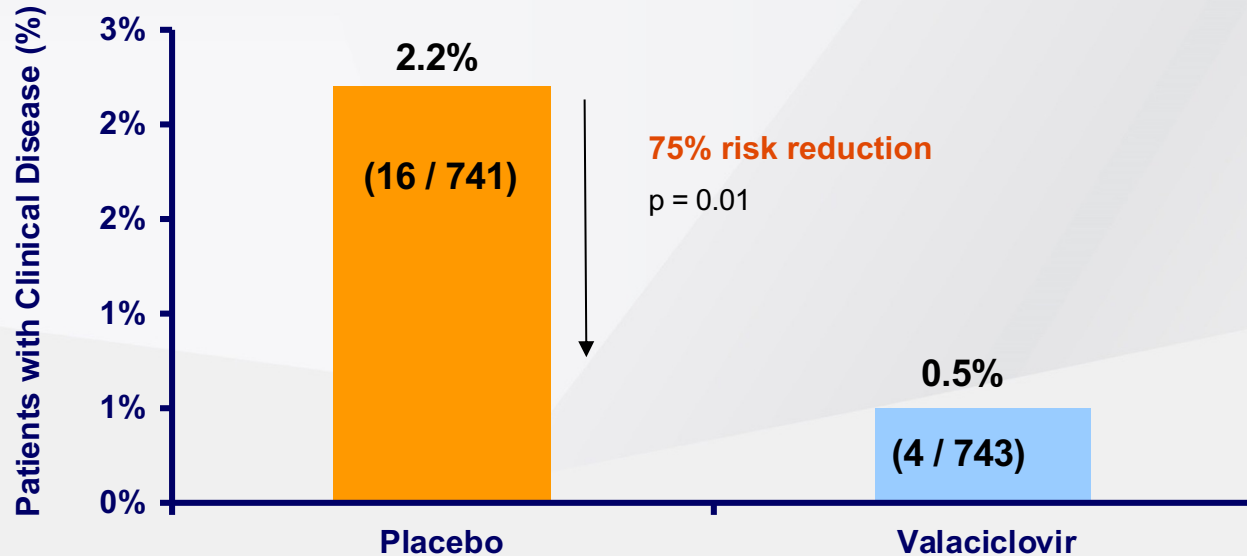
- Once daily Valaciclovir was shown to reduce transmission of GH

Susceptible Partner	Valaciclovir N = 743	Placebo N = 741
Number with clinical genital herpes	4 (75% reduction)	16
Number with serological HSV-2 infection	14 (48% reduction)	27

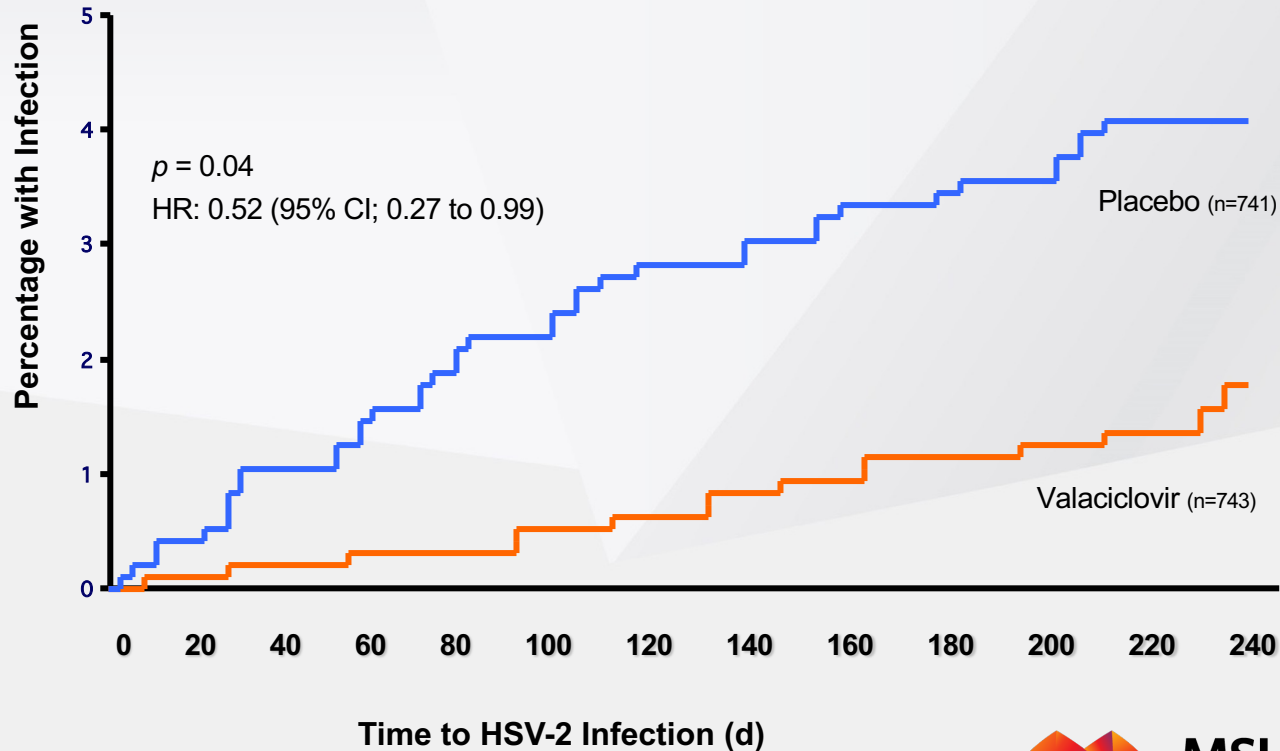


Proportion of susceptible partners with symptomatic HSV

Primary endpoint



Time to HSV-2 Infection in susceptible partners



Adapted from Corey L et al. N Engl J Med. 2004 Jan 1;350(1):11-20.



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Conclusions

Benefits to those infected¹

- Significantly fewer days of total viral shedding in source partners vs. placebo
- Significantly fewer recurrences in source partners vs. placebo
- Generally well-tolerated

Benefits to those at risk¹

- 75% reduction in risk of transmission of symptomatic genital herpes vs. placebo
- 48% reduction in risk of overall acquisition vs. placebo
- Benefit over placebo across all ranges of condom usage

Valaciclovir is the first antiviral agent shown to reduce sexual transmission of HSV ¹

1. Corey L et al. N Engl J Med. 2004 Jan 1;350(1):11-20.



Safety data with long term use

- Long term use of antiviral suppression of HSV is effective and well tolerated ^{1,2}
 - No untoward side effects or evidence of cumulative toxicity apparent after up to 20 yrs of acyclovir use.

1. Goldberg LH et al. Arch Dermatol 1993; 129(5): 582-7 2. Tyring SK et al. J Infect Dis 2002 Oct 15;186 Suppl 1:S40-6.



Patient preference

- 72% of patients with frequent recurrences preferred suppressive therapy over episodic ^{1*}
- Suppressive therapy is associated with improved QoL ^{2,3}
- Suppressive therapy associated with significantly greater treatment satisfaction and QoL (than episodic) ¹

* In an open-label, randomised, cross-over 48-week study comparing Valtrex OD suppressive therapy versus Valtrex BD episodic therapy, n=202; p<0.001

1. Romanowski B et al. Sex Transm Dis 2003; 30(3): 226-31 2. Handsfield HH et al. Sex Transm Dis 2007; 34(6): 339-343

3. Patel R et al. Sex Transm Inf 1999; 75(6): 398-402



Suppressive therapy

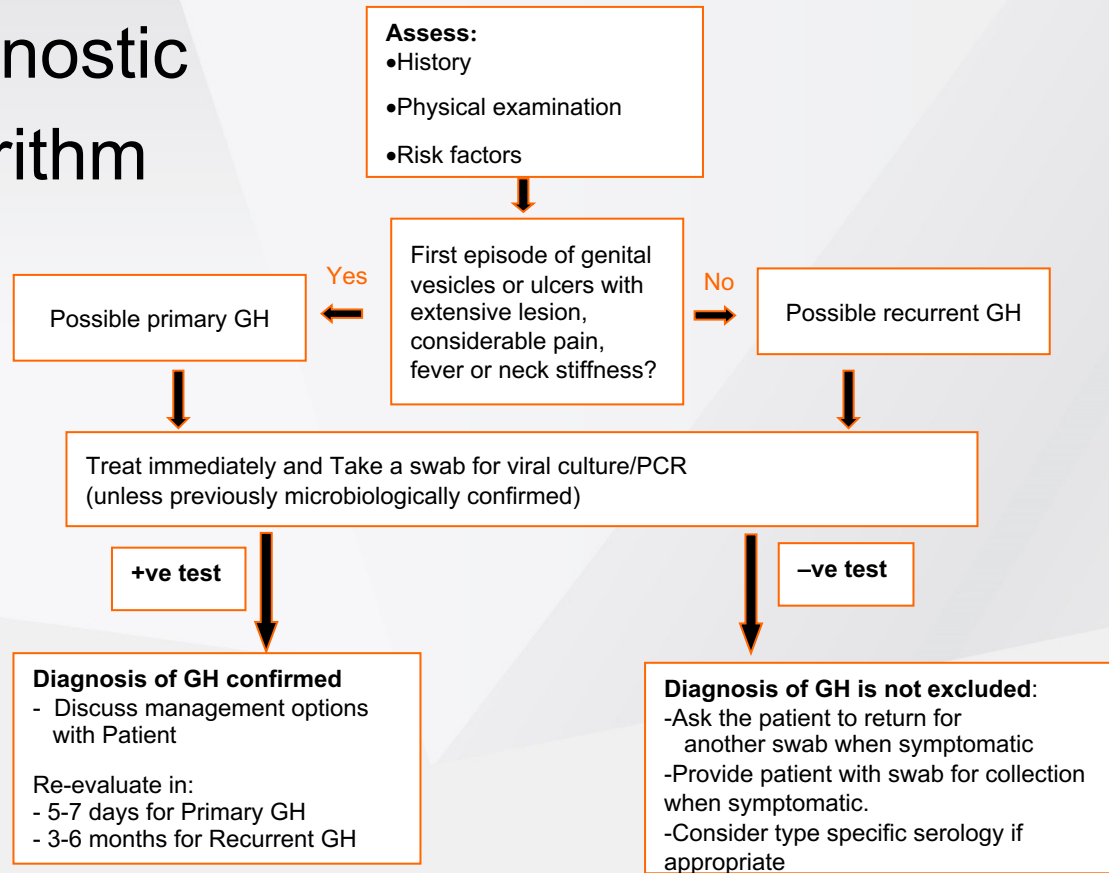
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Diagnostic algorithm



Adapted from International Herpes Management Forum. Algorithms for managing genital herpes in primary care. 11 Nov 2000.



Conclusions

- Patient education is central to the management of GH with patients
- Transmission can be reduced by using a number of different strategies



Case Studies



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Case study 1 - Jemima

- Jemima is a 29-year-old woman who presents with vulval soreness and pain when urinating

History

- Was treated 5 months ago for a UTI (MSU -ve)
- She recalls having associated genital soreness, and having a few sores on her inner thighs
- She remembers a similar episode almost a year ago

Physical examination

- Vulva unusually red and tender
- A few small ulcers on the right labia majora
- No vaginal discharge
- Bilateral tender and mildly swollen inguinal nodes
- Oral temperature 37.5 °C



Further information / history

- Jemima has had three short-term sexual relationships in the past 8 months, and separated from her latest partner 1 week ago
- She says her partners always used condoms, but not with oral sex
- Her first boyfriend, Harry, is returning next week after 2 years working on an isolated cattle station in North Queensland. She hopes to resume their former (sexual) relationship
- Jemima has not previously been screened
- She does not think any of her previous partners have had GH or any other STI
- She is currently not taking any medication

What are some provisional diagnoses?



What tests would you perform?

- Swab of lesion for HSV-PCR
- HSV type-specific serology
- Cervical or high vaginal swab for gonorrhoea culture /NAAT and chlamydia NAAT
- Serology for HIV, HBV, syphilis
- MSU
- Cervical screening test (CST) if due



How would you treat Jemima's symptoms?

- Antiviral therapy?
- Topical antiviral?
- Oral analgesic?
- Oral antibiotic?
- Vaginal antifungal?
- Lesion management?
- Recommend urinating in tepid saline bath to ease dysuria?
- High fluid intake?
- Nothing?



Results - Scenario 1

- Viral swab PCR
 - HSV-1 negative
 - HSV-2 positive
- Serology - HSV IgG
 - HSV-1 negative
 - HSV-2 positive

Diagnosis and patient concerns

- Recurrent episode of GH caused by HSV-2
- Jemima is distressed by the diagnosis
 - She wants to know where she got it from?
 - She is particularly concerned about the possibility of transmission to Harry

Should therapy with valaciclovir be suggested to Jemima both for symptom control and to reduce the risk of transmission?



Results - Scenario 2

- Viral swab PCR
 - HSV-1 negative
 - HSV-2 negative
- Serology - HSV IgG
 - HSV-1 negative
 - HSV-2 negative

What would you do now?



Case study 2 - Giles

- Giles is a 34-year-old man, recently divorced after 7 years of marriage
 - Diagnosed with genital HSV-2 approximately 8 years ago
 - His ex-wife was HSV-2 positive
 - He experiences approximately 6 recurrences per year
 - He is currently taking episodic antiviral therapy
- Giles is hoping to enter a new sexual relationship with Melanie, a 26-year-old woman
 - He is concerned about possible transmission of HSV-2 to her

How would you advise him?



Case study 3 - Kieran

- Kieran is a 36-year-old man whose partner Julie (32yrs), is 10 weeks pregnant
- They have been in a sexual relationship for 3 years
- Kieran has few recurrences of GH due to HSV-2, and mild symptoms when recurrences occur.
- He is not taking antiviral therapy

HSV Status

- Kieran: HSV-2 positive, HSV-1 positive (diagnosed 6 yrs ago)
- Julie: HSV-2 negative, HSV-1 positive

Further Information

- Julie seeks treatment for a UTI
- Julie and Kieran are not aware that HSV can be transmitted from an infected mother to a baby during the birth process
- They are also unaware of the possible consequences of neonatal herpes

How would you advise them?



Case study 4 – Gina

- Gina is a 24-year-old woman who suffers with recurrent thrush, diagnosed by another doctor
- She has been self treating using OTC anti-fungal products
- She comes to you complaining that the symptoms keep recurring

Physical examination

- Vulval skin is reddened
- Several small fissures on the labia
- Slight vaginal discharge
- Oral temperature 37.5 °C

Further information

- Gina has been in a stable, monogamous relationship for the past 2 years and has had no prior sexual relationships
- Gina has had several episodes of cystitis over the past few years, with a particularly severe episode about 18 months ago

What is your provisional diagnosis?



What further tests would you perform?

- Swab from vaginal wall for gram stain and microscopy
- High vaginal swab for bacterial/fungal culture
- HSV PCR
- HSV type-specific serology
- MSU for mcs
- FPU for gonorrhoea/chlamydia PCR testing
- Serology for HIV, HBV, syphilis
- Fasting plasma glucose



Results

- Positive for *Candida glabrata*
- Viral swab PCR
 - HSV-1 negative
 - HSV-2 positive
- Type-specific serology
 - HSV-1 negative
 - HSV-2 positive
- All other tests negative

What treatment would you recommend?



Counselling

- What would you advise Gina?
- Should she tell her partner she is HSV-2 positive?
- Should she ask her partner his HSV status?
- Should she ask her partner to undergo serological testing?



Case study 5 – Ben

- Ben is a 32-year-old labourer with a 2-year history of GH
- Ben is seeking your advice regarding how to best manage his GH

What questions do you ask during the consultation?



Initial history

- Ben has 4-6 episodes per year
 - Symptoms last 4-5 days and are severe
- Ben is bisexual
 - He does not think he has much risk of getting HIV as he only has oral sex with male partners

What else would you ask/ do?



Action taken

Clinical examination

- No lesions, erythema, discharge or other abnormalities observed
- Ben is asymptomatic at the time of consultation
- Full STI screen undertaken

- Ben asked to return when symptomatic
- Ben's original GP confirms diagnosis of HSV-2 by PCR 2 years ago
 - Was treated with valaciclovir



HSV management

- Ben returns 2 weeks later with small ulcers on his thighs
- HSV infection is confirmed by PCR
- Results of STI screen - All negative apart from HSV

What treatment regimen would you recommend?

What else would you counsel Ben on?



Test Question Bank



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Question

- Which of the following may be symptoms of a primary episode of GH?
 - Itching in the genital area
 - Dysuria
 - Urinary retention
 - Erectile dysfunction
 - Constipation
 - Urethral discharge
 - Neck stiffness



Question

- Most HSV-2 infections are acquired from individuals with no history of GH

True / False?

- In HSV-2-positive individuals who have a history of recurrent GH, most transmissions occur when lesions are not present

True/ False?



Question

- Do you swab all patients with suspected HSV infection

Yes/ No?

- If yes, which diagnostic test do you use?

- PCR
- Culture
- Direct antigen detection
- Serology



Question

- How often do you use type-specific serology to confirm a patient's HSV diagnosis?



Question

- What treatment regimen do you use to manage patients with recurrent GH?



Question

- Do you think it is necessary to raise the issue of transmission with patients newly diagnosed with GH?

Yes/ No?



Question

- Which of the following antiviral agents has been shown to reduce the risk of transmission of genital HSV-2
 - Acyclovir
 - Valaciclovir
 - Famciclovir



Question

- How long can patients be treated with suppressive antiviral therapy?

