# Case Presentations

Dr Charlie Dixon

Registrar at Cairns North Sexual Health Clinic

- Case 1: PrEP for non cis-gender men who have sex with men (MSM)
- Case 2: PEP/PrEP use with Chronic Hepatitis B infection
- Case 3: HIV and Hepatitis C co-infection

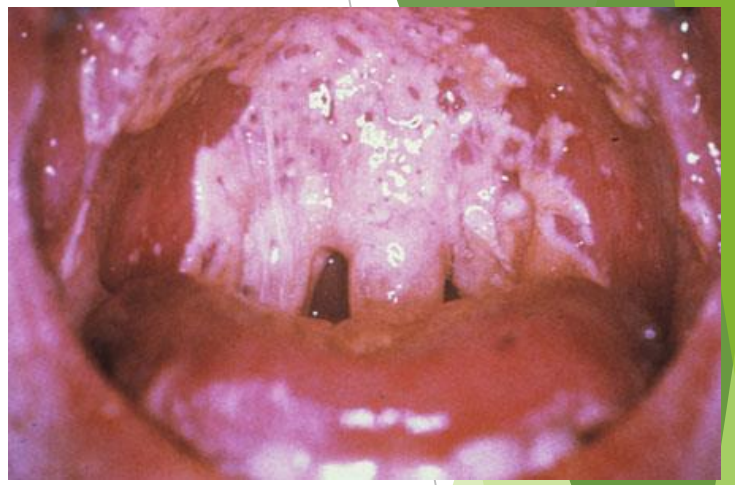
# Case 1

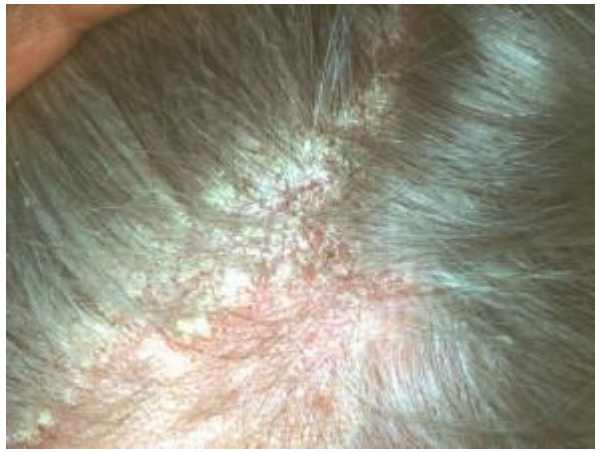
- 24 ATSI male
- Seen with RFP and 2 month old daughter
- Referred by GP with +ve HIV test result as part of STI screen
- Partner aware of HIV diagnosis
- No reported risk factors for HIV (some UPSI with females and recreational drug use)
- RFP for 18 months, reported only protected SI since the pregnancy and in post natal period, last protected SI was 3 weeks ago

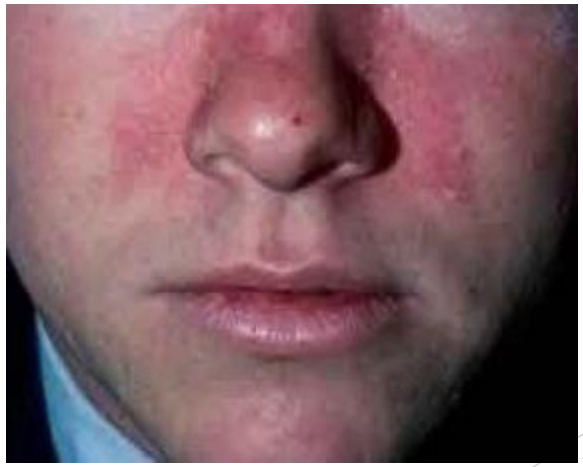
- No PMHx/DHx, NKDA
- Smoker 20+/d, daily cannabis use, occasional ETOH
- Lives with RFP, baby, 2 step children and brother

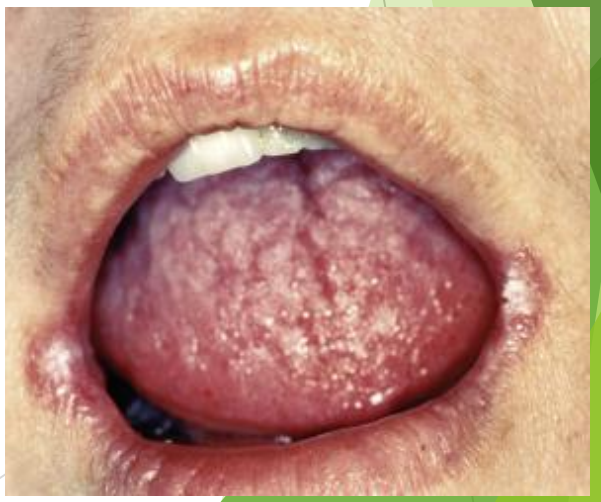
# O/E

- Looked unwell, cachectic, seborrheic dermatitis on face/scalp
- Wt 48Kg, BMI 16.6, HR 90bpm, BP 132/84, afebrile
- Angular stomatitis/cheilitis
- Oral candida (asymptomatic)
- Resp/CV/Abdo exams nad
- Penile lesions and HPV warts









# Plan for today….

- Rushing off for school pick-up!
- Routine HIV new diagnosis bloods: HIV ab (confirmatory), Lymph subsets, HIV VL/RNA, FBC, Chem20, lipids, HAV IgG, HBV serology, HCV Ab, Syphilis EIA, HIV GRA, Quant TB Gold, (HLA-b57 typing)
- STI screen plus penile lesion swabs for HSV/Syphilis

- Treated for HSV and syphilis today
  - Valaciclovir 500mg bd for 7 days, then od for 6 months
  - Benzathine penicillin (Bicillin) 1.8g IM stat
- Planned f/u to start medication in 5/7

# Investigations

- HIV viral load 610,619
- CD4 70 (7%)
- HAV IgG reactive
- HBsAg non reactive, HBsAb <10, HBcAb non reactive
- HSV2 detected penile swab

- FBC/Chem20/Lipids nad
- Syphilis EIA/penile swab non reactive

# 1 week later seen to start medication….

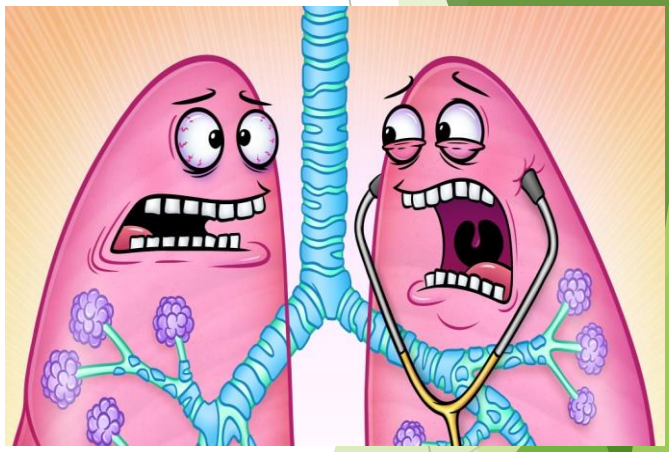
- Anti-retroviral Medication (ART):
  - **Biktarvy** (bictegravir 50mg, FTC 200mg, TAF 25mg)

- Opportunistic Infection prophylaxis medication:
  - PJP/PCP/Pneumocystis pneumonia: **Bactrim** (trimethoprim+sulfamethoxazole 960mg, ½ tab daily) – CD4 <200
  - Toxoplasma gondii: **Bactrim** – CD4 <100
  - Mycobacterium avium complex (MAC): **Azithromycin** (1g, 1*/week) – CD4 <100/50

- HSV2: **Valaciclovir** (500mg bd for 7/7 then od as suppressive Rx 6/12+)
- Oral Candida: **Fluconazole** (100mg daily 14/7)
- Nicotine patches and gum

# On rushing out the door….

Mentioned fever, cough with green sputum, night sweats, felt was reaction to Bicillin that never went away



- O/E T 38.4
- No time to examine fully but definitely some crackles in lung bases
- Agreed to have a CXR

- CXR confirmed extensive bilateral LL pneumonia
- Commenced Doxycycline 100mg bd 7/7 (delivered to his door by one of our Health Workers!)

# Additional considerations

- Vaccinations (Influenza, pneumococcal, HBV, HPV)
  - Flu and 1st HBV vacc given
- Contact Tracing
  - Only current RFP
- Partner and child's HIV status
- ***Future risk to partner**
- Effects on relationship
- Friend/Family support
- Confidentiality
- Stigma

# RFP

- Already aware, supportive

- Last protected SI 3 weeks ago
- Last UPSI prior to pregnancy
- No recent SI due to HSV lesions

- RFP tested negative at first presentation
- Re-tested at 6 week (window period) – NEGATIVE and hence no need to test daughter
- Further confirmatory test at 3 months

# Ways to protect partner

- Discussed from Day 1
- PrEP use
- Condoms
- HBV vaccination


# PrEP in Heterosexuals: ASHM PrEP Guidelines Sept 2019 update

**Box 14.2** PrEP suitability criteria for heterosexuals

**HIV risk in the previous 3 months and the future 3 months**

**The clinician should prescribe PrEP if the patient describes a history of any of the following HIV acquisition risks in the previous 3 months and if the patient foresees that there are likely to be similar acquisition risks in the next 3 months.**

- At least one episode of condomless anal or vaginal intercourse (insertive or receptive) with a regular HIV-positive partner who is either not on treatment, or who is on treatment but has a detectable HIV viral load
- At least one episode of receptive anal or vaginal condomless intercourse with any casual HIV-positive partner or a male bisexual partner of unknown status
- Episodes of planned condomless insertive or receptive vaginal sex in an effort to conceive with an HIV-positive partner, regardless of the HIV-positive partner's viral load.

# Important to remember for those having vaginal sexual intercourse

- Daily dosing only
- 7 days before (think of it like contraception!)
- 28 days after

- All other treatment regimes (on demand/intermittent/Ts+Ss) only for cis-gender MSM

# PrEP = TDF/FTC (Truvada)

- Potential side effects:
  - GI (nausea, diarrhoea, abdominal cramps)
  - Tiredness, headache
- Potential contraindications:
  - Renal disease
  - Chronic hepatitis B infection
  - Osteoporosis
  - Undiagnosed HIV infection
  - Pregnancy

# Case 2

- 27 Thai TGF presented to the evening clinic at 6pm requesting PEP
- Unprotected receptive anal/neo-vaginal sexual intercourse with HIV+ CMP
  - No information about casual partners viral load or HIV management
- Client based in Brisbane, under SH services there, no notes available
- PMHx
  - Top and bottom surgery in Thailand 3 years ago
  - Chronic Hepatitis B, not on treatment, says is ‘stable’
- DHx
  - Estradiol valerate (Progynova) 8mg daily
  - Cyproterone acetate (Androcur) 50mg daily

# PEP/PrEP Use with Chronic Hepatitis B infection

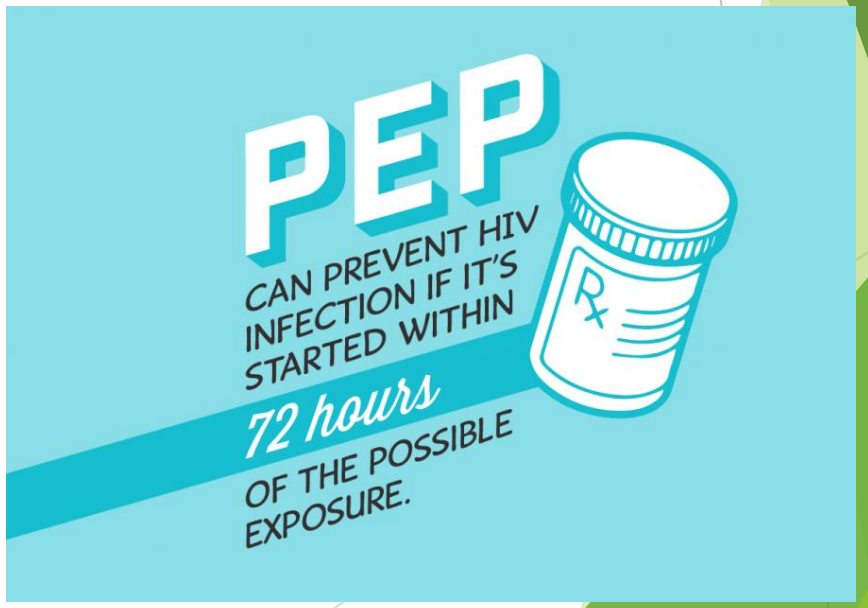
- PEP/PrEP – Truvada (tenofovir disoproxil (TDF) and emtricitabine (FTC)
- Chronic HBV – current first-line drugs of choice are tenofovir (or entecavir)

Key points:

- PEP (short term use of Tenofovir) is safe
- PrEP is safe if continued long-term as it will also virologically suppress the HBV
- On Demand/intermittent PrEP use is not advised due to:
  - Risk of HBV hepatic flare or relapse
  - Risk of resistant HBV infection

# So what did I do….?
# I phoned a friend!

- Luckily that evening I was working with Darren!
- Gave PEP - emergency 3/7 pack and script for 28 days
- Discussed PrEP but advised to follow up in Brisbane
- Informed Brisbane Clinic of above



# Case 3

- 51 MSM
- Referred by GP as HIV/HCV co-infection (Dec 2015)
- RMP, no SI for 12 months
- CMPs
- Last high risk SI was 8 weeks ago – threesome with 2*CMPs, unprotected anal sex (RAI and IAI)
- Informed contact of NG 2 weeks later
- PMHx Melanoma
- DHx Diazepam prn
- Smoker, alcohol ++, denied elicit drug use, lives with RMP

# O/E

- Looked well
- No visible jaundice
- Weight 57, BMI 17.8, Pulse 87, Blood pressure 96/68, afebrile
- Sats 96% RA
- Generalised lymphadenopathy
- Oral thrush
- Resp/CVS exams nad
- Enlarged liver with smooth edge, spleen not palpable

# Ix

- HIV and HCV bloods (HCV RNA or V/L, HCV GT, FBC, Chem20)
- STI screen
- USS liver including elastography
- CXR

Alternatives to USS:

- APRI Score

(upper limit AST: males 40, females 30)

- Fibroscan

$$\text{APRI} = \frac{\dfrac{\text{AST Level}}{\text{AST (Upper Limit of Normal)}}}{\text{Platelet Count } (10^9/\text{L})} \times 100$$

# Positive findings:

- HIV VL 317,276
- CD4 520 (11%)
- HCV RNA 5.3*10^6, Genotype 3
- AST 96 (40), ALT 56 (45), GGT 100 (55)
- PLTs 237 (150-400*10^9)
- HAV IgG reactive, HBVsAg non reactive
- USS: Hepatosplenomegaly, liver 20cm, no focal lesions, no significant fatty changes plus incidental finding of gallstones
- CXR: Bilateral non specific increased density in perihilar regions, not felt to be PJP

# Treatment

- HIV: TDF/FTC (Truvada) + Dolutegravir
- HCV: not initiated immediately as DAAs (direct acting antivirals) were becoming available within next 6 weeks
  - Daclatasvir + sofosbuvir 12 weeks
    - Not effective with advanced cirrhosis, no longer first line therapy

# Progress

- HIV undetectable by 8 weeks
- HCV treated within 3 months, undetectable @ SVR12 (sustained virological response at 12 weeks after completion of treatment)

- Once Descovy (TAF/FTC) available was switched to Descovy/Dolutegravir
- March 2019 was switched to STR (single tablet regime) Biktarvy

# ASHM Recommended ARVs for Initial Therapy/US Department of Health and Human Services Guidelines:

| Recommended Initial Regimens for Most People with HIV |
| --- |
| Recommended regimens are those with demonstrated durable virologic efficacy, favorable tolerability and toxicity profiles, and ease of use. |
| •<u>INSTI plus 2 NRTIs:</u><br>**Note:** For individuals of childbearing potential, see Table 6b before prescribing one of these regimens.<br>•BIC/TAF/FTC **(AI)**<br>•DTG/ABC/3TC[a] **(AI)—if HLA-B*5701 negative**<br>•DTG plus tenofovir[b]/FTC[a] (**AI** for both TAF/FTC and TDF/FTC)<br>•RAL[c] plus tenofovir[b]/FTC[a] (**BI** for TDF/FTC, **BII** for TAF/FTC) |
| **Recommended Initial Regimens in Certain Clinical Situations** |
| These regimens are effective and tolerable but have some disadvantages when compared with the regimens listed above or have less supporting data from randomized clinical trials. However, in certain clinical situations, one of these regimens may be preferred (see Table 7 for examples). |

# How is HCV transmitted?

- Blood
- Sexually

- Why are MSM more at risk of HCV?
  - HCV found in semen and rectal mucosa
  - Anal SI potentially more traumatic – at risk of bleeding
  - Unprotected SI e.g secondary to PrEP use
  - Sexual Practice e.g group sex, numbers of casual partners
  - Chemsex e.g cocaine straws leading to bleeding of nasal mucosa, IVDU
  - Co-infection with ulcerative STIs e.g herpes, syphilis and/or bacterial STIs
- Why are MSM living with HIV at an even higher risk of acquiring HIV?
  - Still unclear
  - As above but more of it?!
  - Serosorting – MSM with HIV have higher seminal HCV loads

# What were his Risk Factors for HCV acquisition?

Blood to blood transmission:

- No IVDU
- Tattoo Bali 20 years ago

Sexual transmission (body fluids +/- blood):

- Unprotected anal intercourse (URAI)
- Uncircumcised
- Concurrent STI e.g Gonorrhoea
- HIV co-infection

# Screening for HCV

| Recommendations for Testing and Prevention of HCV Infection in Men Who Have Sex With Men (MSM) | |
|---|---|
| RECOMMENDED | RATING |
| Annual HCV testing is recommended for sexually active HIV-infected adolescent and adult MSM. Depending on the presence of high-risk sexual or drug use practices, more frequent testing may be warranted. | IIa, C |
| HCV testing at HIV pre-exposure prophylaxis (PrEP) initiation and at least annually thereafter (while on PrEP) is recommended in HIV-uninfected MSM. Depending on sexual or drug use risk practices, more frequent testing may be warranted. | IIa, C |
| All MSM should be counseled about the risk of sexual HCV transmission with high-risk sexual and drug use practices, and educated about measures to prevent HCV infection or transmission. | IIa, C |

# Key Take Away Points in HIV/HCV co-infection

- Two largest cohorts – MSM and IVDUs
- MSM and in particular those living with HIV or on PrEP should be screened at least annually for HCV
- Prompt treatment of HCV is equally as important as treatment with ARVs due to likelihood of increased rate of progression to liver cirrhosis, HCC and hence mortality (even in those with an undetectable HIV viral load)
- DDIs (drug-drug interactions) between ARVs and DAAs
  - https://www.hep-druginteractions.org/checker (University of Liverpool)

# Thank you for listening and have a Very Merry Christmas!

Questions?