The truth...bit by bit

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NSW, Australia

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Case Presentation of Mr. AF

• Asked to review patient in ED presenting with “sepsis of unknown origin”

• HPI
  – 42 M presented 7/2/17
  – Fevers, malaise, night sweats, and rigors for ~2 weeks
  – Abdominal pain (colicky, constant, generalised) ~3 days
Case Presentation of Mr. AF

• HPI
  – No back or joint pain
  – No chest pain, cough, or dyspnoea
  – No coryza or sore throat
  – No diarrhoea, nausea, or vomiting
  – No urinary symptoms
Case Presentation of Mr. AF

• PMH:
  – *Chlamydia trachomatis* urethritis (2001)
  – Q fever (~2000)
  – Scarlet fever (~1980)

• Medications:
  – None

• Drug hypersensitivities:
  – None
Case Presentation of Mr. AF

- Social history:
  - Smoking: Current, 15-20 cigarettes/day
  - EtOH: None
  - Illicit drug use: Crystal methamphetamine ingested every 1-2 months, last use ~1 month ago, never injected or smoked
Case Presentation of Mr. AF

• Social history:
  – Employment:
    • Labourer currently (NorthConnex)
    • Abattoir worker previously
  – Living situation:
    • Strathfield (friend’s house), moved from Bourke in January 2017
    • 4 children reside with ex-wife in Bourke
Case Presentation of Mr. AF

• Social history:
  – Animal contacts:
    • None
  – Travel history:
    • Domestic travel to Queensland (Gold Coast and Toowoomba) January 2016
    • International travel to Canada and USA ~2001
Case Presentation of Mr. AF

• Examination
  – Vital signs:
    • HR: 78 bpm
    • BP: 115/70 mmHg
    • RR: 18 breaths/min
    • $S_pO_2$: 98% (room air)
    • T: 38.2 °C
Case Presentation of Mr. AF

• Examination
  – Gastrointestinal:
    • Abdomen soft
    • Murphy’s sign negative
    • Tenderness to palpation, percussion, and rebound over right iliac fossa
  – Cardiovascular, musculoskeletal, and respiratory:
    • NAD
Case Presentation of Mr. AF

• Investigation findings:
  – EUC, CMP: N
  – LFT:
    • Bilirubin 5 µM
    • Albumin 35 g/L
    • Protein 80 g/L
    • ALP 60 IU/L
    • GGT 94 IU/L
    • ALT 141 U/L
    • AST 36 IU/L
  – Lipase: 14 IU/L
Case Presentation of Mr. AF

• Investigation findings:
  – FBC:
    • WCC 11.9 (Nφ 7.8, Мφ 1.7, Еφ 0.1, Вφ 0.0)
    • Hb 122 g/L
    • PtC 203
  – CRP 264 mg/L
  – X-ray chest: NAD
Case Presentation of Mr. AF

• Impression:
  – Sepsis and right iliac fossa peritonitis – appendicitis to be excluded

• Suggest:
  – Blood culture and urine m/c/s
  – Ceftriaxone + metronidazole
  – CT abdomen + pelvis
  – Surgery review for admission

• Progress
  – Colorectal Surgery team review and admission
  – CT abdomen and pelvis
Case Presentation of Mr. AF

• Progress
  – Colorectal Surgery team review and admission
  – CT abdomen and pelvis
Case Presentation of Mr. AF

- CT abdomen and pelvis 7/2/17
  - Liver: Poorly-defined hypodense subcapsular lesion (56 x 31 x 47 mm) in segment 6/7 with periportal oedema and subphrenic fluid ?hepatic abscess
  - Left kidney: Poorly-defined hypodense lesion (30 x 28 x 34 mm) in upper pole ?abscess, infarct, or neoplasm
  - Caecum: Mural thickening for ~50 mm with mild fat stranding and numerous small pericolic lymph nodes ?cancer ?colitis
  - Appendix: Fluid-filled and mildly thickened (8 mm diameter) ?obstruction by caecal abnormality
Case Presentation of Mr. AF

• US abdomen 8/2/17
  – Appendix and caecum: Hyperaemia and thickening without peristalsis ?colitis
  – Liver: Hypoechoic subcapsular lesion (3.6 x 4.2 x 6.5 cm, 51ml) in segment 6 with porta hepatis lymphadenopathy but without internal blood flow ?abscess
  – Left kidney: No lesion demonstrated
Case Presentation of Mr. AF

• Summary
  – 42 M with subacute abdominal pain/tenderness and sepsis and caecal, kidney, and liver lesions on imaging
• Differential diagnoses?
• Difference between CT and US findings in left kidney?
• Retrospective study of 62 patients hospitalised with acute renal infections
• 15 patients with renal abscesses investigated with both CT and US
• Computed tomography
  – Sensitivity: 93% (14/15)
  – Specificity: 100% (15/15)
• Ultrasonography
  – Sensitivity: 47% (7/15)
  – Specificity: 100% (15/15)
Case Presentation of Mr. AF

- Blood cultures x 2 sets: No growth
- Urine m/c/s: negative
- CA19.9: 7 kU/L (NR: ≤37 kU/L)
- CEA: 0.9 μg/L (NR: ≤3 μg/L)
Case Presentation of Mr. AF

- Faeces bacterial PCR

<table>
<thead>
<tr>
<th>Date</th>
<th>Test</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>09-02-2017 13:30</td>
<td>Faeces Bacterial Screen</td>
<td>* See Below</td>
</tr>
<tr>
<td></td>
<td>Faeces Microscopy</td>
<td>NEG</td>
</tr>
<tr>
<td></td>
<td>Salmonella DNA</td>
<td>Not Detected</td>
</tr>
<tr>
<td></td>
<td>Shigella DNA</td>
<td>Not Detected</td>
</tr>
<tr>
<td></td>
<td>Campylobacter DNA</td>
<td>Not Detected</td>
</tr>
<tr>
<td></td>
<td>Clostridium difficile Detection</td>
<td>NEG</td>
</tr>
</tbody>
</table>
Case Presentation of Mr. AF

• Further investigation findings:
  – US-guided drainage of ~60 ml blood-stained pus from liver lesion
    • Cytology: Neutrophils and lymphocytes in a background of degenerate debris, no malignant cells seen
    • Microscopy and culture: Pus cells ++++, no organisms seen, no growth

• Antibiotic regimen alteration?
• Additional investigations?
Case Presentation of Mr. AF

• Further investigation findings:
  – *Entamoeba histolytica* serology: 320 - positive
  – Faeces parasite DNA PCR: Not detected

<table>
<thead>
<tr>
<th>Faeces Parasite Screen</th>
<th>See Below</th>
</tr>
</thead>
<tbody>
<tr>
<td>Giardia intestinalis DNA</td>
<td>Not Detected</td>
</tr>
<tr>
<td>Cryptosporidium spp. DNA</td>
<td>Not Detected</td>
</tr>
<tr>
<td>D. fragilis DNA</td>
<td>Not Detected</td>
</tr>
<tr>
<td>E. histolytica DNA</td>
<td>Not Detected</td>
</tr>
</tbody>
</table>

  – Pus *Entamoeba histolytica* DNA PCR: Detected
  – Urine *Entamoeba histolytica* DNA PCR: Not detected
Case Presentation of Mr. AF

• Progress:
  – Ceftriaxone ceased
  – Metronidazole dose increased to 800 mg PO q8h for 10 days
Case Presentation of Mr. AF

- Progress:

![Graphs showing WCC and C Reactive Protein levels over time.](image)
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• Sexual history (by myself):
  – Females only
  – 6 sexual partners in the past 6 months
  – Oral and vaginal sex
  – Condom use inconsistently
  – No sex worker contact
Case Presentation of Mr. AF

• Sexual history revisited (by Tom Gottlieb):
Case Presentation of Mr. AF

• Sexual history revisited (by Tom Gottlieb):
  – “I’ve been seeing an Asian sheila”
  – “She’s a “working lady” who travels between Sydney and Bourke on the train”
  – “But I don’t pay her”
  – “I haven’t put it in anyone’s bum”
Case Presentation of Mr. AF

- Further investigation findings:

<table>
<thead>
<tr>
<th>Date</th>
<th>Test Description</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>09-02-2017</td>
<td>Hepatitis A Antibodies IgM</td>
<td>Negative.</td>
</tr>
<tr>
<td>09-02-2017</td>
<td>Hepatitis A Antibodies IgM Interp</td>
<td>Negative.</td>
</tr>
<tr>
<td>09-02-2017</td>
<td>Hepatitis B Surface Antigens</td>
<td>Negative.</td>
</tr>
<tr>
<td>09-02-2017</td>
<td>Hepatitis B Surface Antibodies</td>
<td>315 mIU/mL</td>
</tr>
<tr>
<td>09-02-2017</td>
<td>Hepatitis B Core Antibodies</td>
<td>Positive.</td>
</tr>
<tr>
<td>09-02-2017</td>
<td>Hepatitis C Antibodies</td>
<td>@ Positive.</td>
</tr>
<tr>
<td>09-02-2017</td>
<td>HIV 1/2 Ab</td>
<td># Negative.</td>
</tr>
<tr>
<td>09-02-2017</td>
<td>HIV 1/2 Ab</td>
<td># Negative.</td>
</tr>
<tr>
<td>09-02-2017</td>
<td>Syphilis Summary</td>
<td>Negative.</td>
</tr>
<tr>
<td>09-02-2017</td>
<td>Syphilis Antibodies EIA Screen</td>
<td>@ Positive</td>
</tr>
<tr>
<td>09-02-2017</td>
<td>HCV Supplementary Assay (EIA)</td>
<td>Positive.</td>
</tr>
</tbody>
</table>
Case Presentation of Mr. AF

• Further investigation findings:

<table>
<thead>
<tr>
<th>Date</th>
<th>Specimen Source</th>
<th>First Void Urine</th>
</tr>
</thead>
<tbody>
<tr>
<td>10-02-2017</td>
<td>Specimen Source</td>
<td>First Void Urine</td>
</tr>
<tr>
<td></td>
<td>Chlam.trachomatis DNA</td>
<td>* Not Detected</td>
</tr>
<tr>
<td></td>
<td>N.gonorrhoeae DNA</td>
<td>* Not Detected</td>
</tr>
</tbody>
</table>
Case Presentation of Mr. AF

• Progress
  – Discharged from hospital 10/2/17
  – Colonoscopy 22/2/17 – did not attend
  – CT abdomen + pelvis 10/3/17
  – Follow-up ID Clinic 13/4/17 for review and paromomycin – did not attend, no response despite multiple phone calls and voicemail messages
Case Presentation of Mr. AF

- CT abdomen + pelvis 10/3/17
  - Liver: Abscess size decreased (52 x 23 x 35 mm) in segment 6/7
  - Kidneys: Left renal abscess resolution
  - Caecum: Mural thickening resolved
Amoebiasis epidemiology

• Prevalence
  – 4-40% in endemic areas (Africa, Asia, Central and South Americas)
  – 0.2-10% in non-endemic areas

• Risk factors
  – Endemic area migration or travel
  – HIV infection
  – Institutionalisation
  – MSM
Amoebiasis microbiology

- *Entamoeba histolytica* ± *E. moshkovskii* pathogenic
- All other *Entamoeba* species (e.g. *E. dispar*) non-pathogenic
- Transmission
  - Faecal-oral
  - Sexual
    - Oral-anal sex
    - Oral-genital sex after genital-anal sex
    - Fomites (e.g. sex toys)
Amoebiasis prevalence


Intestinal parasitic infections in homosexual men: prevalence, symptoms and factors in transmission.

Keystone JS, Keystone DL, Proctor EM.

- 200 homosexual and 100 heterosexual male volunteers completed questionnaire and submitted a stool specimen in SAF fixative for OCP assessment in Toronto, Canada, May-August 1978

Table I—Prevalence of intestinal parasitic infection in homosexual and heterosexual men as determined by stool examination

<table>
<thead>
<tr>
<th>Parasite</th>
<th>No. (and %) of men infected</th>
<th>Heterosexual (n = 100)</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Entamoeba histolytica</em> or <em>Giardia lamblia</em> or both*</td>
<td>73 (36.5)</td>
<td>4 (4)</td>
</tr>
<tr>
<td>Nonpathogenic protozoa†</td>
<td>61 (30.5)</td>
<td>12 (12)</td>
</tr>
<tr>
<td><em>Ascaris lumbricoides</em></td>
<td>1 (0.5)</td>
<td>-</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>135 (67.5)†</td>
<td>16 (16)</td>
</tr>
</tbody>
</table>

*Of the homosexual and heterosexual men 54 (27%) and 1 (1%) respectively were infected with *E. histolytica* and 26 (13%) and 3 (3%) were infected with *G. lamblia*.
†In order of decreasing frequency, *Endolimax nana, Entamoeba hartmanni, Entamoeba coli, Iodamoeba buetschlii* and *Dientamoeba fragilis*.
‡Difference significant at P < 0.001 by chi-square analysis.

Table III—Relation of various factors to parasitic infection in the two groups

<table>
<thead>
<tr>
<th>Sexual orientation and factor*</th>
<th>Infectected</th>
<th>Uninfected</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heterosexual</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Foreign travel</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>History</td>
<td>3 (12)</td>
<td>22 (88)</td>
<td>25 (100)</td>
</tr>
<tr>
<td>No history</td>
<td>13 (17)</td>
<td>62 (83)</td>
<td>75 (100)</td>
</tr>
<tr>
<td>Homosexual</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Foreign travel</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>History</td>
<td>46 (70)</td>
<td>20 (30)</td>
<td>66 (100)</td>
</tr>
<tr>
<td>No history</td>
<td>89 (66)</td>
<td>45 (34)</td>
<td>134 (100)</td>
</tr>
<tr>
<td>Type of household</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Homosexual</td>
<td>68 (67)</td>
<td>33 (33)</td>
<td>101 (100)</td>
</tr>
<tr>
<td>Heterosexual</td>
<td>67 (68)</td>
<td>32 (32)</td>
<td>99 (100)</td>
</tr>
<tr>
<td>No. of sexual partners in previous 6 months</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0-1</td>
<td>11 (50)</td>
<td>11 (50)</td>
<td>22 (100)</td>
</tr>
<tr>
<td>&gt; 10</td>
<td>44 (71)</td>
<td>18 (29)</td>
<td>62 (100)</td>
</tr>
<tr>
<td>Cleansing before anal sex</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Done</td>
<td>65 (61)</td>
<td>41 (39)</td>
<td>106 (100)</td>
</tr>
<tr>
<td>Not done</td>
<td>70 (74)</td>
<td>24 (26)</td>
<td>94 (100)</td>
</tr>
</tbody>
</table>

*The only factor significantly correlated (P = 0.05) with infection was a lack of cleansing before anal sex.
Amoebiasis prevalence in Sydney, Australia

PCR detection of Entamoeba histolytica, Entamoeba dispar, and Entamoeba moshkovskii in stool samples from Sydney, Australia.

Fotedar R¹, Stark D, Beebe N, Marriott D, Ellis J, Harkness J.

- 5921 stool specimens from 110 patients (3 females, 107 males) with diarrhoea submitted to SVH January 2003-June 2006

<table>
<thead>
<tr>
<th>TABLE 1. Clinical details of patients positive for E. histolytica by PCR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient age (yr) and sex</td>
</tr>
<tr>
<td>-------------------------</td>
</tr>
<tr>
<td>36, male</td>
</tr>
<tr>
<td>35, male</td>
</tr>
<tr>
<td>31, male</td>
</tr>
<tr>
<td>53, male</td>
</tr>
<tr>
<td>57, male</td>
</tr>
</tbody>
</table>
Amoebiasis prevalence in Sydney, Australia

Prevalence of enteric protozoa in human immunodeficiency virus (HIV)-positive and HIV-negative men who have sex with men from Sydney, Australia.


- Stool specimens submitted to SVH for OCP testing from 1,246 MSM (628 HIV-positive, 618 HIV-negative) and 622 non-MSM males attending General Practices March 2003-February 2006

<table>
<thead>
<tr>
<th>Parasite</th>
<th>No. (%) MSM</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>HIV- (n = 628)</td>
</tr>
<tr>
<td>Potential pathogens</td>
<td></td>
</tr>
<tr>
<td><em>Entamoeba histolytica</em></td>
<td></td>
</tr>
<tr>
<td><em>E. dispar</em> complex†‡§</td>
<td>34 (5.4)</td>
</tr>
<tr>
<td><em>Giardia intestinalis</em></td>
<td>17 (3)</td>
</tr>
<tr>
<td><em>Cryptosporidium species</em>§</td>
<td>2 (0.6)</td>
</tr>
<tr>
<td><em>Dientamoeba fragilis</em></td>
<td>5 (0.8)</td>
</tr>
<tr>
<td><em>Blastocystis hominis</em>§¶</td>
<td>135 (21)</td>
</tr>
<tr>
<td>Non-pathogenic</td>
<td></td>
</tr>
<tr>
<td><em>Endolimax nana</em>†</td>
<td>74 (12)</td>
</tr>
<tr>
<td><em>Entamoeba coli</em>‡</td>
<td>30 (5)</td>
</tr>
<tr>
<td><em>Entamoeba hartmanni</em>‡§</td>
<td>27 (4)</td>
</tr>
<tr>
<td><em>Iodamoeba butschlii</em></td>
<td>24 (4)</td>
</tr>
<tr>
<td><em>Enteromonas hominis</em>§</td>
<td>9 (1.4)</td>
</tr>
<tr>
<td><em>Chilomastix mesnili</em></td>
<td>6 (0.9)</td>
</tr>
<tr>
<td><em>Trichomonas hominis</em></td>
<td>0</td>
</tr>
<tr>
<td><em>Retortamonas hominis</em></td>
<td>0</td>
</tr>
</tbody>
</table>
Amoebiasis sexual transmission in non-MSM patients

- Contact tracing of 7 cases of amoebiasis in 4 bisexual females, 1 homosexual female, and 2 heterosexual males engaging in oral-anal sex and genital-anal sex

<table>
<thead>
<tr>
<th>Patient</th>
<th>Age, years; sex</th>
<th>Disease</th>
<th>Date of diagnosis</th>
<th>Microscopic analysis of stool</th>
<th>Antigen detection</th>
<th>Serological titer</th>
<th>Travel history (date)</th>
<th>Sexual contacts</th>
<th>Sexual preference</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>40; F</td>
<td>Liver abscess</td>
<td>Feb 2008</td>
<td>ND</td>
<td>ND</td>
<td>3200</td>
<td>UK, Germany, Italy (Aug–Sep 2007)</td>
<td>C, G, E</td>
<td>Bisexual</td>
</tr>
<tr>
<td>B</td>
<td>28; F</td>
<td>Asymptomatic; RLQ abdomen lymphadenopathy</td>
<td>Apr 2008</td>
<td>Entamoeba</td>
<td>ND</td>
<td>ND</td>
<td>UK, Germany, Italy (Aug–Sep 2007)</td>
<td>C, D, G</td>
<td>Bisexual</td>
</tr>
<tr>
<td>C</td>
<td>28; M</td>
<td>Liver abscess</td>
<td>May 2008</td>
<td>ND</td>
<td>ND</td>
<td>12,800</td>
<td>UK, Germany, Italy (Aug–Sep 2007)</td>
<td>A, B, D</td>
<td>Heterosexual</td>
</tr>
<tr>
<td>D</td>
<td>26; F</td>
<td>Asymptomatic</td>
<td>Jun 2008</td>
<td>Entamoeba</td>
<td>ND</td>
<td>800</td>
<td>None</td>
<td>C, B, G</td>
<td>Bisexual</td>
</tr>
<tr>
<td>F</td>
<td>32; F</td>
<td>Asymptomatic</td>
<td>Oct 2008</td>
<td>Entamoeba</td>
<td>ND</td>
<td>None</td>
<td>None</td>
<td>G</td>
<td>Homosexual</td>
</tr>
<tr>
<td>G</td>
<td>30; F</td>
<td>Asymptomatic</td>
<td>Sep 2008</td>
<td>Entamoeba</td>
<td>Yes</td>
<td>1600</td>
<td>Italy (Dec 2007)</td>
<td>A, B, D, F, H</td>
<td>Bisexual</td>
</tr>
<tr>
<td>H</td>
<td>30. M</td>
<td>Asymptomatic</td>
<td>Sep 2008</td>
<td>Negative*</td>
<td>ND</td>
<td>ND</td>
<td>None</td>
<td>G</td>
<td>Heterosexual</td>
</tr>
</tbody>
</table>
Amoebiasis sexual transmission in non-MSM patients

A possible cluster of sexually transmitted Entamoeba histolytica: genetic analysis of a highly virulent strain.

Salit IE¹, Khairnar K, Gough K, Pillai DR.
Amoebiasis clinical features

• Asymptomatic carriage (~90%)
  – 5-10% risk of progression to disease at 12 months

• Intestinal disease (~10%)
  – Diarrhoea (94-100%), haematochezia (94-100%), abdominal pain (12-80%), weight loss (~50%), and fever (~40%)
  – Amoeboma, fistulae, necrotic colitis, and toxic megacolon (rare)

• Extra-intestinal disease (~1%)
  – Liver abscess (most common, haematogenous spread)
  – Empyema and/or lung abscess (liver abscess rupture > haematogenous spread)
  – Pericarditis (liver abscess rupture > haematogenous spread)
  – Brain abscess (haematogenous spread)
  – Perianal disease (direct inoculation)
Amoebic kidney abscess

• Literature review
  – Embase, Google, MedLine, and PubMed
55 M migrant from Mali in France
No comorbidities
Anaemia, melaena, and weight loss for ~3 months
CT demonstrated right colon mass
Right hemicolecotomy for presumed colorectal cancer
Septic shock unresponsive to antibiotic therapy for 6 days post-surgery
CT demonstrated liver and right kidney abscesses
Liver abscess drainage and right nephrectomy
*E. histolytica* trophozoites identified in colon, kidney, and liver abscesses
*E. histolytica* serology positive
Metronidazole for 30 days curative
First report of genitourinary amoebiasis in Thailand.

Saensiriphan S¹, Rungmuenporn L², Phiromnak P², Yingyeun S², Klayjunteuk S³, Pengsakul T¹.

- 63 F in Thailand
- No comorbidities
- Back pain, diarrhoea, dysuria, and fevers
- *E. histolytica* trophozoites identified in faeces and urine
- No imaging or serology described
- Metronidazole for 7 days curative
## Amoebic kidney abscess

<table>
<thead>
<tr>
<th>Patient age and gender</th>
<th>Comorbidities</th>
<th>Clinical features</th>
<th>Imaging modalities</th>
<th>Microbiology investigations</th>
<th>Curative treatment</th>
<th>Source</th>
</tr>
</thead>
</table>
Renal amoebic abscess detected on grey-scale ultrasonography. A case report.

Andrew WK, Thomas RG.

<table>
<thead>
<tr>
<th>Author</th>
<th>Date</th>
<th>Site and No. of abscesses</th>
<th>No. of cases</th>
<th>Probable route of infection</th>
<th>Hepatic abscess</th>
<th>Result</th>
<th>Quoted by</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kulz</td>
<td>1913</td>
<td>Renal (multiple)</td>
<td>2</td>
<td>?</td>
<td>?</td>
<td>?</td>
<td>Kirsh and Diaz-Riviera</td>
</tr>
<tr>
<td>Hartmann and Keppel</td>
<td>1923</td>
<td>Renal</td>
<td>1</td>
<td>Operative drainage of liver abscess</td>
<td>Yes</td>
<td>?</td>
<td>As above</td>
</tr>
<tr>
<td>Vichrew</td>
<td>1924</td>
<td>Renal (miliary cortical)</td>
<td>1</td>
<td>?</td>
<td>?</td>
<td>?</td>
<td>As above</td>
</tr>
<tr>
<td>Casco</td>
<td>1932</td>
<td>Renal</td>
<td>1</td>
<td>?</td>
<td>?</td>
<td>Amoebic pus in urine</td>
<td>As above</td>
</tr>
<tr>
<td>Kirsh and Diaz-Riviera</td>
<td>1943</td>
<td>Perinephric</td>
<td>1</td>
<td>Lymphatic</td>
<td>Liver enlarged. No abscess</td>
<td>Surgically drained and treated with emetine</td>
<td></td>
</tr>
<tr>
<td>Ross</td>
<td>1944</td>
<td>Perinephric</td>
<td>1</td>
<td>?</td>
<td>?</td>
<td>Treated with emetine</td>
<td></td>
</tr>
<tr>
<td>Andrew and Glyn Thomas</td>
<td>1979</td>
<td>Renal lower pole — single</td>
<td>1</td>
<td>Amoebic lung abscess</td>
<td>Nil</td>
<td>Aspirated and treated with metronidazole</td>
<td></td>
</tr>
</tbody>
</table>
Case Presentation of Mr. AF

• Why present this case?
  – Rare complication of an uncommon infection
  – Sexual history evolution
    • No contact with sex workers
      ➔ My partner is a sex worker from South East Asia
References

• Foteder R. *et al.*. PCR detection of *Entamoeba histolytica, Entamoeba dispar* and *Entamoeba moshkovskii* in stool samples from Sydney, Australia. *J Clin Microbiol*. 2007. 45: 1035-1037
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