Trends & treatment in STI Management in Primary Care

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PENYAKIT SYPHILIS, GONORRHoeA & CHANCROID DI MALAYSIA, 2009 – 2015 (annualized)

<table>
<thead>
<tr>
<th>Tahun</th>
<th>Bilangan kes</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009</td>
<td>912</td>
</tr>
<tr>
<td>2010</td>
<td>1181</td>
</tr>
<tr>
<td>2011</td>
<td>1365</td>
</tr>
<tr>
<td>2012</td>
<td>1492</td>
</tr>
<tr>
<td>2013</td>
<td>1419</td>
</tr>
<tr>
<td>2014</td>
<td>1769 (gonorrhoea)</td>
</tr>
<tr>
<td>2015</td>
<td>1689 (syphilis)</td>
</tr>
</tbody>
</table>
PENYAKIT CONGENITAL SYPHILIS DI MALAYSIA, 2009 – 2015 (annualized)

<table>
<thead>
<tr>
<th>Tahun</th>
<th>Bilangan kes</th>
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<tr>
<td>2009</td>
<td>45</td>
</tr>
<tr>
<td>2010</td>
<td>33</td>
</tr>
<tr>
<td>2011</td>
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<td>2012</td>
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<td>2013</td>
<td>19</td>
</tr>
<tr>
<td>2014</td>
<td>29</td>
</tr>
<tr>
<td>2015</td>
<td>32</td>
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</table>
### STIs in Genitourinary Clinic in HKL (2010-2013)

<table>
<thead>
<tr>
<th>Diagnosis</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
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</thead>
<tbody>
<tr>
<td>HIV</td>
<td>35</td>
<td>31</td>
<td>36</td>
</tr>
<tr>
<td>Syphilis</td>
<td>602</td>
<td>831</td>
<td>943</td>
</tr>
<tr>
<td>Gonorrhea</td>
<td>132</td>
<td>132</td>
<td>126</td>
</tr>
<tr>
<td>NSU</td>
<td>158</td>
<td>173</td>
<td>96</td>
</tr>
<tr>
<td>Genital Herpes</td>
<td>258</td>
<td>229</td>
<td>255</td>
</tr>
<tr>
<td>Candidiasis</td>
<td>105</td>
<td>104</td>
<td>214</td>
</tr>
<tr>
<td>Chlamydia</td>
<td>20</td>
<td>57</td>
<td>37</td>
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<tr>
<td>Genital Warts</td>
<td>769</td>
<td>828</td>
<td>727</td>
</tr>
<tr>
<td>Scabies</td>
<td>28</td>
<td>27</td>
<td>22</td>
</tr>
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Any significant difference in STD between MSM and non MSM?

<table>
<thead>
<tr>
<th>STI type</th>
<th>No of cases among MSM</th>
<th>No of cases among non MSM</th>
<th>Total STI</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Syphilis</td>
<td>18 (85.7%)</td>
<td>3 (14.3 %)</td>
<td>21</td>
<td>.000</td>
</tr>
<tr>
<td>Gonorrhea</td>
<td>3 (75%)</td>
<td>1 (25%)</td>
<td>4</td>
<td>.311</td>
</tr>
<tr>
<td>Genital/ anal warts</td>
<td>5 (83.3%)</td>
<td>1 (16.7%)</td>
<td>6</td>
<td>.083</td>
</tr>
<tr>
<td>Herpes simplex</td>
<td>0</td>
<td>1 (100%)</td>
<td>1</td>
<td>1.000</td>
</tr>
<tr>
<td>Hepatitis B</td>
<td>2 (50%)</td>
<td>2 (50%)</td>
<td>4</td>
<td>1.000</td>
</tr>
</tbody>
</table>
Emerging Issues: Hepatitis C

• Hepatitis C is a Blood Borne Infection and is not efficiently transmitted through sexual activity.

• However, study shows increasing incidence of acute HCV among MSM with HIV infection especially of those:
  • Engage in high risk and traumatic sexual practices
  • Have concurrent genital ulcerative disease or STD related proctitis
  • Participates in group sex and chem sex.

• Hep C screening
  • Initial evaluation of HIV
  • At least yearly testing in MSM with HIV infection.
STIs Prevention – Key Principles

• Counselling to reduce STIs acquisition
• Screening of asymptomatic persons
• Diagnosis and treatment of symptoms
• Management of sex partners
• Vaccination:
  • Human Papillomavirus
  • Hepatitis A and Hepatitis B
Why Diagnose and Treat STIs?

- Statistic does shows increasing trend of notifiable STIs prevalence in Malaysia.
- Health consequences of untreated STIs
  - Women’s reproductive health
    - Untreated CT or GC may lead to PID
    - Leading infectious cause of infertility
  - Infant mortality / morbidity
    - Neonatal HIV, HSV, Congenital Syphilis
  - HIV transmission
- Health care cost
WHAT ARE THE GOAL OF STI MANAGEMENT

INDIVIDUAL

PUBLIC HEALTH
Goals of STI management - Individual

- Cure infection
- Prevent complications & sequelae of infection
- Reduce transmission of the infection
- Identify other asymptomatic infections
- Counselling for future risk reduction
- Co-ordinate care for exposed partners
- Offer vaccination
Goals of STI management - Public Health

- Identify & treat maximum number of individuals
- Contact tracing
- Reduce prevalence of STIs
- Identify those at potential risk & offer preventative strategies
- Surveillance systems
- Rational allocation of budgets
STIs Treatment

• Approaches to STI management:
  • Syndromic Approach
  • Aetiological Approach
MODIFIED SYNDROMIC APPROACH TO STI MANAGEMENT

• 2000, KKM identified 3 main syndromes for local use at PHC level:
  • urethral discharge
  • vaginal discharge
  • genital ulcer.

• This approach: Modified Syndromic Approach (MSA).
  • Lab Ix requested to identify aetiological organism
  • Follow – up apt given
  • Syndromic treatment commenced at first visit
Gonorrhoea

• Common presentation urethral / vaginal discharge.
• Asymptomatic infection can occur:
  • Women > men
  • Men : urethral < 10%, rectum > 85%, pharynx > 90%
  • Women: endocervix > 50%, rectum > 85%, pharynx > 90%
• Culture is the gold standard for diagnostic test (Sensitivity : 60-70% Specificity 100%)
• NAAT (Sensitivity : 95 – 96%, Specificity 99%)
• Gram stain of urethral, cervical or rectal exudates
  • Gram negative intracellular diplococci in leucocytes (Gram stain is not appropriate for pharyngeal specimens)
  • Male : Sensitivity 95%, (symptomatic), 50-75% (asymptomatic) Specificity 99%
  • Female : Sensitivity 45 – 65%, Specificity 90%
Treatment for uncomplicated anogenital Gonorrhoea

- Dual therapy: IM 500 mg single dose ceftriaxone plus 1 g azithromycin.
- Dose of ceftriazone increased from 250 to 500 mg following development of resistance in other regions.
- Alternative regime
  - Cefixime 400 mg single dose P.O. \((\text{Grade A, Ib})\); OR
  - Cefotaxime 500 mg I.M. as a single dose \((\text{Grade A, Ib})\); OR
  - Spectinomycin 2 g I.M. as a single dose \((\text{Grade A, Ib})\)

- CDC guide line 2015
  - Dual therapy, but still recommended ceftriaxone 250mg stat.
  - Test of cure not needed after treatment for urogenital or rectal infection; recommended for pharynx.
  - Expedited partner therapy effective in reducing reinfection.
Gonorrhoea : Follow up

• To confirm compliance to treatment
• To ensure resolution of symptoms
• To enquire about adverse reactions
• To re-take sexual history to explore the possibility of re-infection
• To pursue partner notification and health promotion
Chlamydia trachomatis

- *Chlamydia trachomatis* is the commonest bacterial STI and the prevalence is highest in persons aged ≤ 25 years.
- Asymptomatic infection is common among both men (50 – 60%) and women (50 – 70%)
- Common presentation vaginal / urethral / ano-rectal discharge, dysuria, arthralgia /symptoms and sign of PID in women and epididymo orchitis and prostatitis in men.
Chlamydia trachomatis : Lab Test

• Gram Stain
  • Increased PMNs (average of > 5 per high power field in urethral smear and > 20 per high power field in endocervical smear, > 10 in first void urine)
  • To exclude Gram-negative intracellular diplococci

• NAAT
  • These tests are highly sensitive and specific and are suitable for non-invasive samples such as urine and low vaginal swabs
  • Multiplex PCR assays are available for the simultaneous detection of chlamydia and gonorrhea
  • Sensitivity of 87-98% and specificity of 98 – 100%
  • Consider pharyngeal and rectal swabs depending upon sexual exposure

• Cell Culture : gold standard, not recommended for routine use.
Chlamydia trachomatis: treatment

- Uncomplicated urethral, rectal and pharyngeal infection
- Recommended
  - Doxycycline 100 mg b.d. P.O. for 7 days; OR
  - Azithromycin 1 g single dose P.O.
- Alternative
  - Ofloxacin 200 mg b.d. or 400 mg daily P.O. for 7 days; OR
  - Erythromycin stearate 500 mg q.i.d. P.O. for 7 days; OR
  - Erythromycin ethyl succinate 800 mg q.i.d. P.O. for 7 days
- Patients should abstain from sexual intercourse for 7 days until after they and their sexual partners have completed treatment.
Non Gonococcal Urethritis

• Common organism
  • *Chlamydia trachomatis*,
  • *Mycoplasma genitalium*
  • *Ureaplasma urealyticum*,
  • *Trichomonas vaginalis*

• Symptoms: urethral discharge, urinary frequency, dysuria with / without clinical sign of balanitis, balanoposthitis, epididymo-orchitis and SARA (Sexually Acquired Reactive Arthritis)

• asymptomatic
Non Gonococcal Urethritis: Lab Test

• Gram stain: Gram stained urethral smear containing 5 or more PMNL per high power field in urethral smear
• Chlamydia Antigen Immunofluoresence Test (IF)
• Urethral Swab for Gonococcal culture or NAAT
• Urine NAAT for gonorrhea and Chlamydia
• Urethral swab microscopy (wet mount) for Trichomonas vaginalis
Non Gonococcal Urethritis: treatment

• Recommended regime (grade A)
  • Azithromycin 1g orally in a single dose (Ib); OR
  • Doxycycline 100mg b.d orally for 7 days

• Alternative regime (grade A)
  • Erythromycin stearate 500mg b.d for 14 days (Ib); OR
  • Ofloxacin 200mg b.d or 400mg once a day for 14 days (Ib); OR
  • Erythromycin ethylsuccinate 800mg orally q.i.d for 7 days; OR
  • Levofloxacin 500mg orally once daily for 7 days

##A test of cure in NGU in an otherwise asymptomatic individual is not recommended (B, III)
STAGES OF SYPHILIS

ACQUIRED:

• Early
  - Primary
  - Secondary
• Latent
  - Early (CDC: < 1 year ; WHO < 2 years )
  - Late (CDC: > 1 year ; WHO > 2 years )
• Tertiary: cardiovascular, neurological or gummatous involvement
SYPHILIS TREATMENT: RECOMMENDED REGIMEN

EARLY SYPHILIS
• Benzathine penicillin, 2.4 mega units I.M. in a single dose (Grade A, Ib) OR
• Procaine penicillin G, 600,000 units I.M. daily for 10 days (Grade B, III)

LATE SYPHILIS
• Benzathine penicillin, 2.4 mega units I.M. weekly X 3 weeks (3 doses) (Grade B, III) OR
• Procaine penicillin G, 600,000 units I.M. daily for 17 days (Grade B, III)
SYPHILIS TREATMENT: ALTERNATIVE REGIMEN

EARLY SYPHILIS

• Ceftriaxone 500 mg I.M. daily for 10 days \(\text{(Grade B, I)}\) OR
• Doxycycline 100 mg b.d. P.O. for 14 days \(\text{(Grade B, III)}\); OR
• Erythromycin stearate 500 mg q.i.d. P.O. for 14 days \(\text{(Grade B, III)}\); OR
• Erythromycin ethyl succinate 800 mg q.i.d. P.O. x 14 days \(\text{(Grade B, III)}\); OR
• Azithromycin 2 g single dose P.O. \(\text{(Grade B, II)}\)

LATE SYPHILIS

• Doxycycline 100 mg b.d. P.O. for 28 days \(\text{(Grade C, IV)}\); OR
• Erythromycin stearate 500 mg q.i.d. P.O. for 28 days \(\text{(Grade C, IV)}\); OR
• Erythromycin ethyl succinate 800 mg q.i.d. P.O. x 28 days \(\text{(Grade C, IV)}\);
Syphilis: follow up

- Contact tracing
- Examine and investigate sex partner and treat when indicated
- Abstain from sex until 1 week after they and their partner(s) have completed treatment.
  - VDRL titre at 1, 3, 6, 12, 18, 24 months
  - Consider retreatment;
    - Clinical symptoms or signs persist or recur
    - RPR fails to decrease fourfold by one year
    - There is a sustained fourfold rise in RPR titre
TREATMENT – ASYMPTOMATIC CONTACT

Incubating Syphilis
- Benzathine penicillin 2.4 megaunit IM single dose

Alternative
- Doxycycline 100mg bd PO for 14 days or
- Azithromycin 1gm single dose PO
Syphilis in pregnancy

- Screen at booking & repeat at 28 weeks
- Reactive RPR, confirmed with TPHA
- Penicillin regimen appropriate for the woman's stage of syphilis is recommended.
- Doxycycline and tetracycline are contraindicated in pregnancy
- Erythromycin should not be used because of the high risk of failure to cure the foetus.
- Monthly clinical and serological examination till delivery and thereafter follow-up is as in non-pregnant patients
Genital herpes

• Diagnosis
  ▪ Direct IF for HSV Ag
  ▪ Serology- paired sera taken 2 weeks apart
  ▪ Tzank test for multinucleated giant cells

• Treatment
  ▪ Oral Acyclovir 200 mg 5x/daily for 5 days
  ▪ Start within first 3 days of onset of lesion
  ▪ Saline Sitz bath
  ▪ Analgesics
Trichomoniasis

• Diagnosis
  ▪ Saline wet mount – oval or pear shape organism (positive in 30%): Must be performed ASAP as motility diminishes with time
  ▪ PCR

• Treatment
  ▪ Oral Metronodazole 400 mg bd for 5 days or
  ▪ Oral Metronidazole 2 gm stat dose or
  ▪ Tinidazole 2 g stat
  ▪ Pregnancy: Published data suggest no increased risk of tetratogenicity in normal doses SO
  ▪ High dose metronidazole (2g) not recommended in pregnancy and breast feeding (metallic taste in breast milk)
trichomoniasis

• Advice
  ▪ No sex, alcohol until 1 week treatment completed

• Contact tracing
  ▪ Examine and investigate sex partners, treat sex partners epidemiologically

• Follow up
  ▪ 7-10 days- repeat wet mount film