Case Discussion PMTCT Syphilis and HIV

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Cases to be discussed

Syphilis

Case 1: Late treatment

Case 2: Is treatment considered adequate?

Case 3: No recent treatment with suspected new exposure

Case 4: Screening not repeated in high risk groups

HIV

Case 5: Newly diagnosed HIV in pregnancy- How to manage?

Case 6: Unbook/Unscreen – How to approach

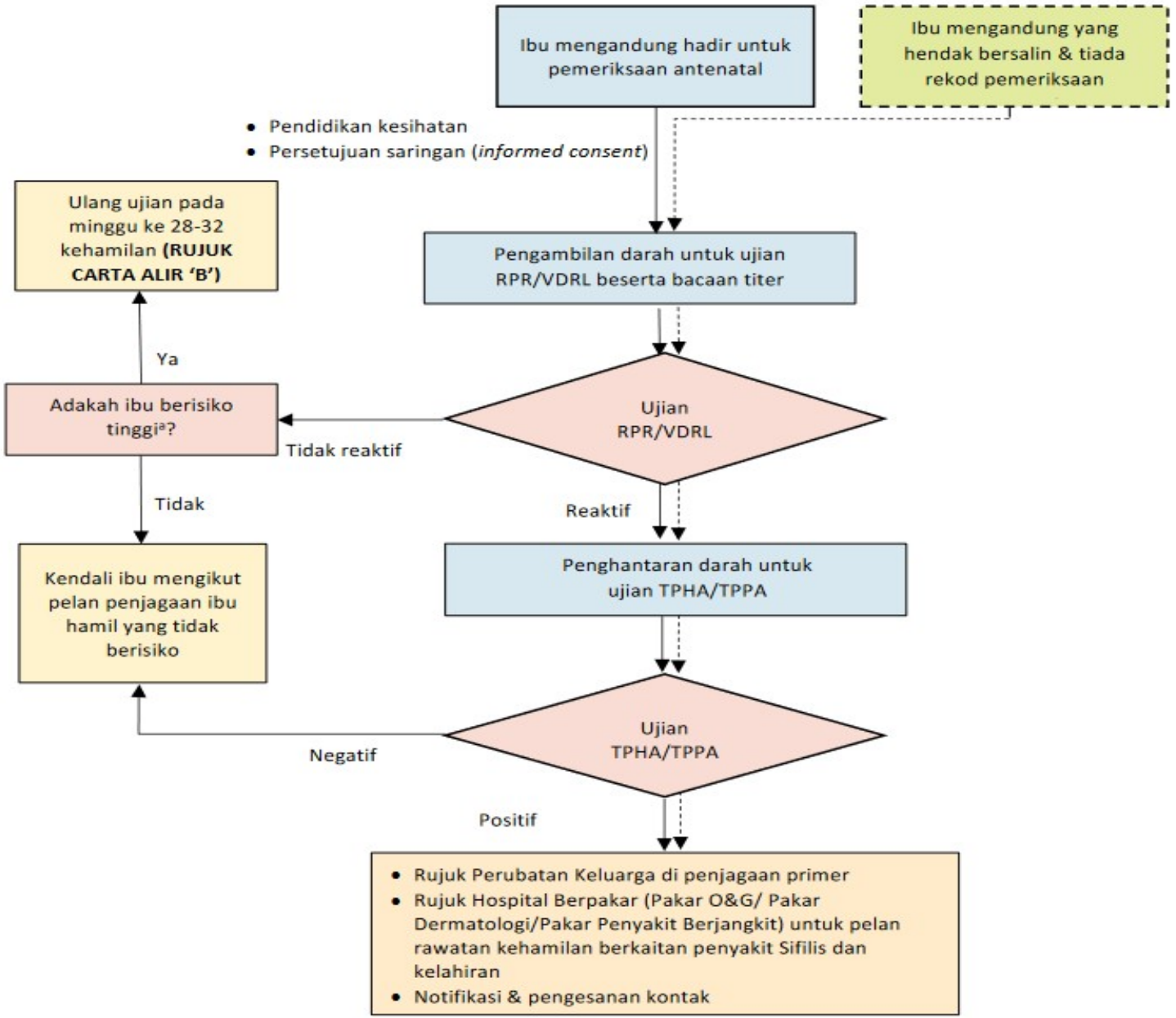
Case 7: History taking is important!

Case 1- MYHCC 580

- Mrs TM, 21years old/ Indian/ unmarried/ para 4
- h/o Multiple partners, drug abuse
- LMP: USOD, REDD: 30.1.23
- Booking date: 17/08/2022@*16W* (2nd trimester)
- Partner's history:
  - Not available

What is your next step?

Rajah 5A: Carta Alir Ujian Saringan Sifilis Ibu Mengandung Semasa Antenatal dan Intrapartum (Strategi Saringan Standard Berasaskan Makmal)



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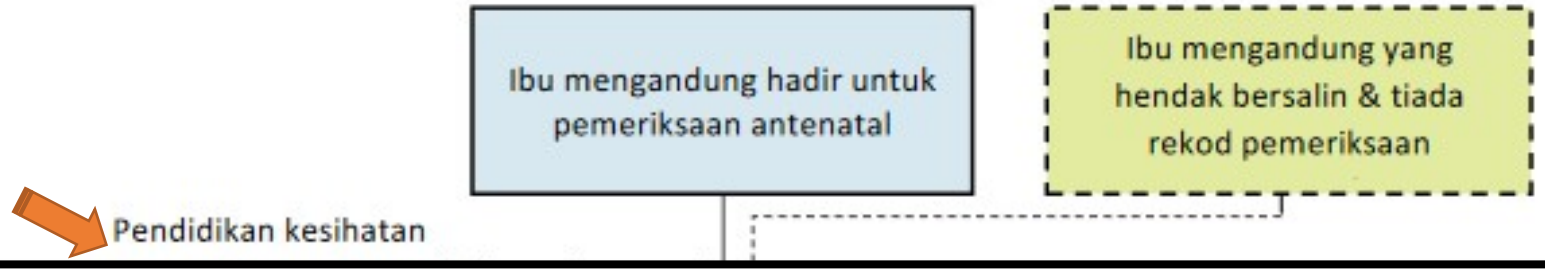


3.1.1 Pendidikan Kesihatan

- Sebelum saringan dilakukan, setiap ibu mengandung perlu diberi maklumat yang tepat mengenai transmisi jangkitan Sifilis, tujuan ujian, kebaikan ujian dan implikasi jangkitan kepada ibu dan anak dalam kandungan. Ianya boleh dilakukan secara bersemuka (berkumpulan atau bersendirian) atau memberi masa yang mencukupi untuk ibu membaca dan memahami brosur kesihatan yang disediakan oleh klinik masing-masing. Panduan maklumat mengenai HIV untuk disampaikan kepada ibu mengandung adalah seperti di **Lampiran 8**.

Rajah 5A: Carta Alir Ujian Saringan Sifilis Ibu Mengandung Semasa Antenatal dan Intrapartum (Strategi Saringan Standard Berasaskan Makmal)

Ibu mengandung hadir untuk pemeriksaan antenatal

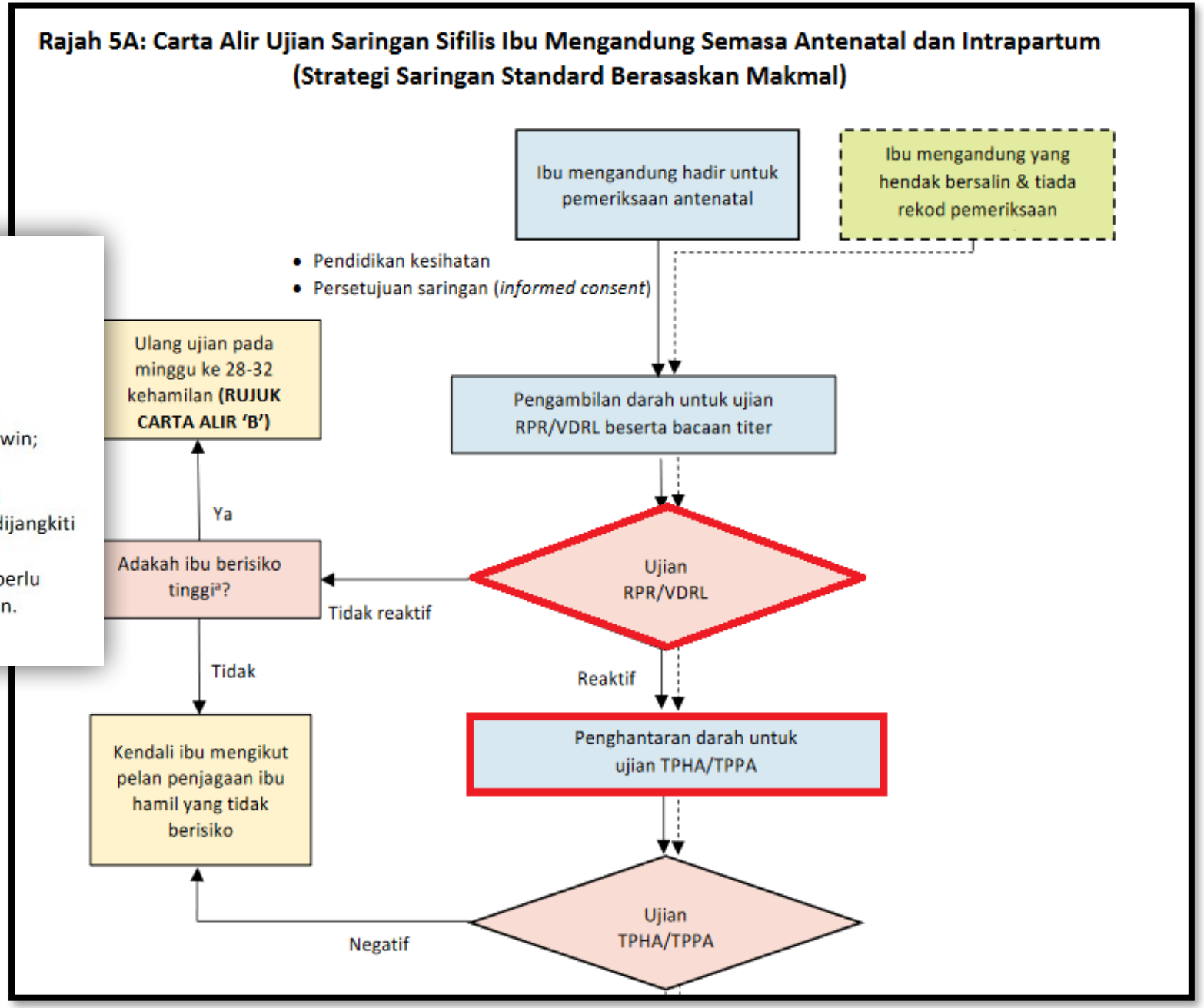
Ibu mengandung yang hendak bersalin & tiada rekod pemeriksaan

- Pendidikan kesihatan
- Persetujuan saringan (*informed consent*)

3.1.2 Persetujuan

Persetujuan ujian saringan perlu diperolehi samada secara bertulis atau *verbal (informed consent)* dan dikemaskini di dalam buku rekod/kad kesihatan ibu.

Rajah 5A: Carta Alir Ujian Saringan Sifilis Ibu Mengandung Semasa Antenatal dan Intrapartum (Strategi Saringan Standard Berasaskan Makmal)



[a]Contoh ibu yang berisiko tinggi:

- Pekerja seks;
- Sejarah penyakit HIV;
- Sejarah penyakit kelamin (STI);
- Sejarah berbilang pasangan;
- Sejarah keguguran/ kelahiran mati;
- Ibu mengandung yang belum berkahwin;
- Kes rogol;
- Sejarah pengambilan alkohol/dadah;
- Mempunyai pasangan seksual yang dijangkiti Sifilis/ HIV;
- Dan lain-lain kriteria yang difikirkan perlu mengikut penilaian anggota kesihatan.

Rajah 5B: Carta Alir Ujian Saringan Sifilis Ibu Mengandung Semasa Antenatal (Strategi Saringan Menggunakan *Rapid Diagnostic Test*)

Ujian saringan menggunakan RDT bagi kes atau situasi berikut:

(i) *"Hard to reach population"* contohnya Orang Asli, di kawasan pendalaman Sabah atau Sarawak dan lain-lain.

(ii) Klinik Kesihatan /Klinik Ibu dan Anak yang tidak mempunyai kemudahan makmal untuk melakukan ujian RPR/VDRL

(iii) *"Late booker"* pada trimester ketiga (≥ 28 minggu)

(iv) Ibu yang berisiko tinggi

- Pendidikan kesihatan
- Persetujuan saringan (*informed consent*)

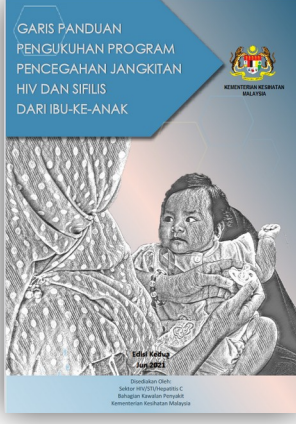
- Pengambilan darah untuk ujian RPR/VDRL beserta bacaan titer DAN
- Ujian *Rapid Diagnostic Test (RDT)*

- Ulang ujian selepas 1 bulan jika *"late booker"* ATAU
- Ulang ujian pada minggu ke 28-32 kehamilan jika berisiko tinggi

Ya

Syphilis screening test:

- 17.08.2022 @16/52 (@booking):
  RTK Syphilis Positive (at KD)
- Patient was given appointment on 18.08.2022 to do RPR/TPPA at KK. Patient defaulted
- Another appointment given on 22.08.2022 to do RPR/TPPA at KK. Defaulted again
- Patient came to KK on 11.11.2022 @ *28/52.*
  RPR NR, TPPA positive.
- Patient was given FMS appt on 24.11.2023.
  Patient defaulted again.



Rajah 5B: Carta Alir Ujian Saringan Sifilis Ibu Mengandung Semasa Antenatal
(Strategi Saringan Menggunakan *Rapid Diagnostic Test*)

Ujian saringan menggunakan RDT bagi kes atau situasi berikut:
(i) *"Hard to reach population"* contohnya Orang Asli, di kawasan pendalaman Sabah atau Sarawak dan lain-lain.
(ii) Klinik Kesihatan /Klinik Ibu dan Anak yang tidak mempunyai kemudahan makmal untuk melakukan ujian RPR/VDRL
(iii) *"Late booker"* pada trimester ketiga (≥ 28 minggu)
(iv) Ibu yang berisiko tinggi

- Pendidikan kesihatan
- Persetujuan saringan (*informed consent*)

- Pengambilan darah untuk ujian RPR/VDRL beserta bacaan titer DAN
- Ujian *Rapid Diagnostic Test (RDT)*

Ujian RDT

Negatif

Adakah ibu *"late booker"* / berisiko tinggi[a]?

Ya

- Ulang ujian selepas 1 bulan jika *"late booker"* ATAU
- Ulang ujian pada minggu ke 28-32 kehamilan jika berisiko tinggi

Tidak

Kendali ibu mengikut pelan penjagaan ibu hamil yang tidak berisiko

Positif

- Rujuk Pakar Perubatan Keluarga / Pegawai Perubatan untuk memulakan rawatan (dos pertama) pada hari yang sama

Reaktif

- Ujian TPHA/TPPA (oleh pihak makmal)
- Beri rawatan (dos kedua & ketiga) untuk ibu di fasa *Late latent Syphilis*/ sejarah menerima rawatan melebihi 2 tahun/ tiada dokumentasi rawatan terdahulu/ tempoh rawatan tidak diketahui

Subsequently…

- Patient presented at HBM on 3/1/2023 @ 36/52 for Premature Contraction.
  - ➢Treated as threatened preterm
    - ➢She was given IM dexa and Cefuroxime
  - ➢RPR NR
  - ➢Discharge home and given TCA at KK on 10.1.2023
    - Defaulted again
- Patient presented again at HBM and delivered on 17.1.2023 @38/52+1/7.
  - **RPR not done**

Infant’s history

- Alive, Born via SVD at 38W1D of gestation at 17/1/2023
- Birth weight : 2.58 kg
- RPR at birth : Not done
- TCA KKBM on 10/2/2023 (day 24 of life):

  Referred to HBM for baby of syphilis mother

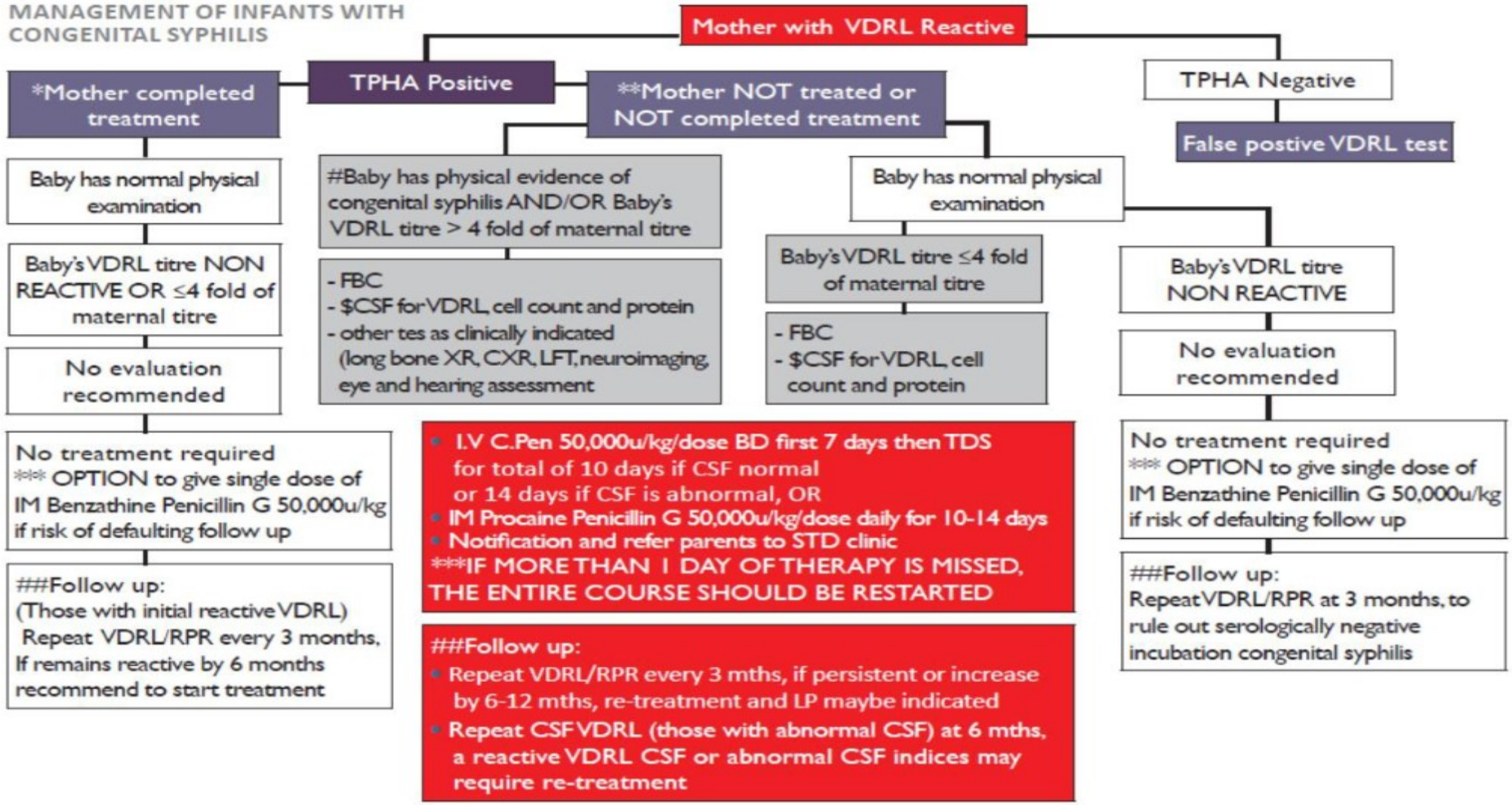
  - 13.2.2023
  - 6.3.2023
  - 8.3.2023
  - 14.3.2023

  Defaulted

- 22/3/2023 @ 2 months old – admitted to HBM , **RPR 1:4**
- **Mother's RPR** (24.3.2023): **1:64** (2/12 postpartum) done in HBM
  - given 1 injection of IM Benzathine Penicillin 2.4MU
- Clinically well and asymptomatic
- Long bone x-ray: done
  - no evidence of long bone osteitis and metaphysitis.
  - no periosteal reaction at all long bones.
  - no fine linear opacities at distal metaphyseal regions giving rise to celery stalk appearance.)

- Treatment(22.3.23):
  IV C Penicillin 225000U BD given for 10/7
- CSF examination (27/2/2023):
  - CSF VDRL: non-reactive,
  - CSF WBC: nil ,
  - CSF Protein:0.45
- 6/7/2023: RPR:NR, TPPA: indeterminate

Rajah 7: Carta alir pengurusan kes dan rawatan bayi yang dilahirkan oleh ibu Sifilis positif



Excerpt from Paediatric Protocols for Malaysian Hospitals, 4th Edition, Ministry of Health, 2018. Section 2: Neonatology. Chapter 30: Congenital Syphilis, pg 169.

Reflection for this case

1. Does the mother was treated adequately?

   No.

   No treatment was given during pregnancy.

   Case was detected and treated at 2 months postpartum

2. Does baby's RPR taken at delivery?

   Not done

3. Does mother's RPR taken at delivery?

   Not done

4. Does this baby has any clinical signs of congenital syphilis?

   No

5. What is the baby's status?

   Probable congenital syphilis

Delay treatment

C) Case Classification:

(i) Probable

A condition affecting an infant whose mother had untreated or inadequately treated* syphilis at delivery, regardless of signs in the infant,

OR

An infant or child who has a reactive non-treponemal test for syphilis (Venereal Disease Research Laboratory (VDRL), rapid plasma reagin (RPR), OR equivalent serologic methods) AND any one of the following:

- Any evidence of congenital syphilis on physical examination (see Clinical description).
- Any evidence of congenital syphilis on radiographs of long bones (e.g.osteochondritis, diaphyseal osteomyelitis, periostitis).
- Serum RPR titre that are at least '4-fold higher' than their mother's.
- A reactive cerebrospinal fluid (CSF) Venereal Disease Research Laboratory (VDRL) test.
- In a non-traumatic lumbar puncture, an elevated CSF leukocyte (white blood cell, WBC) count or protein (without other cause):
  - Suggested parameters for abnormal CSF WBC and protein values:
  - During the first 30 days of life, a CSF WBC count of >15 WBC/mm3 or a CSF protein >120 mg/dl is abnormal.
  - After the first 30 days of life, a CSF WBC count of >5 WBC/mm3 or a CSF protein >40 mg/dl, regardless of CSF serology.
    (The treating clinician should be consulted to interpret the CSF values for the specific patient).

Case 2- MYHCC 634

- Mrs. NEAF, 37 years old, Malay, Married, G7P5+1
- LMP: 10/1/2023, EDD: 9/11/2023
- Booking date: 2/5/2023 @*16/52 POG*

Syphilis Screening test

- RPR 2/5/2023 @16/52 POG, Result: NR

- TPHA: not done

Multiple admission to hospital

- 9/8/2023 (@ 27/52 POG) - admitted 5 days for symptomatic anaemia
- 23/8/2023 (@28/52 6/7 POG): admitted 2 days for symptomatic anaemia
- 5/9/2023 (@30/52 + 5/7 POG): admitted 1/52 for CAP

Cont…

Repeat **RPR** on 20/9/2023 (@32/52 + 6/7 POG)

- *Result came back on 25/9/2023:* **Reactive,** titre **1:32**

RTK Syphilis: Reactive

TPPA (1/10/2023): detected

What will you do for the patient?

Infection (Condition & Likely Organism)	Recommended treatment	Alternative treatment
History of Syphilis infection within the last 2 years: • **Primary Syphilis** • **Secondary Syphilis** • **Early Latent Syphilis**	• *Benzathine Penicillin G, 2.4 MU IM in a single dose* *OR* • *Procaine penicillin G, 600,000 units I.M. daily for 10 days.*	*These may be required for those with Penicillin allergy.* *(All three trimesters)* • *Ceftriaxone 500 mg I.M. daily for 10 days; OR* • *Erythromycin Ethylsuccinate 800 mg QID. P.O x 14 days; OR* • *Azithromycin 2 g P.O x single dose*

Infection (Condition & Likely Organism)	Recommended treatment	Alternative treatment	Comments
History of Syphilis infection within the last 2 years: • **Primary Syphilis** • **Secondary Syphilis** • **Early Latent Syphilis**	• Benzathine Penicillin G, 2.4 MU IM in a single dose OR • Procaine penicillin G, 600,000 units I.M. daily for 10 days.	These may be required for those with Penicillin allergy. (All three trimesters) • Ceftriaxone 500 mg I.M. daily for 10 days; OR • Erythromycin Ethylsuccinate 800 mg QID. P.O x 14 days; OR • Azithromycin 2 g P.O x single dose	Penicillin regimen (appropriate for the woman's stage of syphilis) is the only known effective treatment recommend during pregnancy. If drug administration is interrupted fo 1 day at any point during the treatment course, it is recommended that the entire course is restarted. Patients should be warned of possible reactions to treatment -Jarisch-Herxheimer reaction -Anaphylaxis allergy Abstain from sex for 2 weeks after they and their partner(s) have completed treatment. All sexual partners should be examined, investigated and treated epidemiologically. Erythromycin should not be used because of the high risk of failure to cure the foetus. If erythromycin is used, paediatricians must be alerted and babies have to be treated prophylactically with penicillin and monitored. Tetracycline and Doxycycline are CONTRAINDICATED IN PREGNANCY.

History of Syphilis infection more than 2 years: • ***Late Latent Syphilis*** • ***Gummatous Syphilis*** • ***Cardiovascular Syphilis***	• *Benzathine penicillin, 2.4 MU I.M. weekly X 3 weeks (3 doses) (Day 1, 8 & 15);* *OR* • *Procaine penicillin G, 600,000 units IM daily for 14 days*	*For patients with Penicilin allergy,* • *Erythromycin 500 mg QID P.O for 28 days;* *OR* • *Erythromycin ES 800mg QID P.O for 28 days*	*If patients defaults Benzathine Penicillin treatment by ≥ two weeks in between the weekly doses, the whole regime needs to be restarted.* *For cardiovascular syphilis, consider prednisolone 40-60 mg OD for 3 days strating 24 hours before the antibiotics. Contact tracing and partner notification as above.* *DO NOT USE Doxycycline in pregnancy.*

In this case

Clinical staging: Latent Syphilis

Treatment:

- 1st dose: 27/9/2023 @ 34/52 POG
- 2nd dose: 4/10/2023 @ 34/52 + 6/7 POG
- 3rd dose: 11/10/2023 @ 35/52 + 6/7 POG

How will you monitor this patient?

- Bagi ibu yang telah menerima rawatan, ujian pemantauan serologi (RPR) hendaklah dibuat setiap bulan selepas rawatan lengkap sehingga titer RPR turun "*4-fold*" atau "Tidak reaktif". Selepas itu, ujian RPR perlu diulang setiap 2 bulan sehingga kelahiran.

- Bagi ibu yang berisiko tinggi dijangkiti semula semasa mengandung, ujian pemantauan serologi disyorkan dilakukan setiap bulan selepas rawatan lengkap sehingga kelahiran.

- Ujian RPR juga WAJIB diulang semasa *intrapartum* atau sejurus selepas bersalin agar perbandingan titer dapat dibuat dengan titer anak.

Delivered via SVD on 28/10/2023 @ 38/52 POG

RPR titer on follow up (serial)

- post delivery titer - 1:32 (8/11/2023)
- 3rd month - 1:2 (16/1/2024)

Father's history:

- RPR done 2/10/2023: Reactive titre 1:32
- TPPA done 4/10/2023: Detected
- Treatment given:

  1st dose: 3/10/2023

  2nd dose: 10/10/2023

  3rd dose: 17/10/2023
- RPR titre on follow up (serial):

  13/11/2023: 1:16

  16/1/2024: 1:8

Infant’s history

- live birth, SVD on 28/10/2023 @ 38/52 POG
- Birth weight : 2.7 kg

- RPR at birth : **1:32** TPHA: Not done
- Clinical signs of CS: no
- Long bone X-rays: not done
- Cranial US: Normal
- CSF examination: done on 31/10/2023 (abandoned due to traumatic)

- Treatment:

  IV C Pen 135000u TDS for 14 days

RPR Titre On follow up (serial):

- 28/1/2024: NR
- Next TCA - 29/4/2024

CASE REGISTERED IN E-NOTIFICATION SYSTEM

Reflection for this case

1. Does the mother was treated adequately?

   Yes

2. Does treatment started >30 days prior delivery?

   Yes (31 days)

3. Does baby's RPR taken at delivery?

   Yes. RPR 1:32. Same titre before treatment.

4. Does mother's RPR taken at delivery?

   Yes. RPR 1:32 (taken 1 week after delivery on 8.11.2023)

5. Does this baby has any clinical signs of congenital syphilis?

   No

6. What is the baby's status?

   Probable congenital syphilis

Is treatment adequate?

Case 3- MYHCC 790

- Mrs YA, 26yo/Indian / unmarried/ Para 3
- LNMP: USOD, REDD:24/1/2024.
- Booked ANC at 31w POG.
- Infective screening at booking (22/11/2023):

  RTK HIV: Non Reactive

  RPR: Reactive, Titer 1:4.

  TPPA: Positive.

  No RTK syphilis done.

Cont…

<u>Past history 2021</u> (second pregnancy):

- diagnosed with **latent syphilis**, titer **1:128**.
- had completed IM Benzathine Penicillin 2.4MU weekly x3 doses in February 2021.
- RPR titre post-treatment remain **1:128**.
- Admitted at Hospital Selayang for **resistant syphilis in pregnancy** in April 2021 for IV Penicillin x14 days.
- But *AOR discharged* on Day 9 of treatment.
- **RPR titer at delivery 1:16** and **baby's RPR titer at birth 1:8.**
- Baby completed 10 days of IV C-Penicillin.
- Subsequently defaulted follow up

What will you do for the patient?

Partner’s history

- Mr TS/Indian/gentleman.
- Currently imprisonment since Feb 2023.
- History of latent syphilis in 2021 with titer 1:32
- completed treatment
- Current syphilis status unknown.

What will you do next?

- Bagi ibu mengandung yang terdahulunya telah disahkan dirawat untuk Sifilis (mempunyai kadar antibodi yang stabil rendah (*serofast*), tiada tanda-tanda fizikal jangkitan akut serta tiada peningkatan titer RPR) bermungkin tidak memerlukan rawatan tambahan. Walau bagaimanapun, ibu tersebut memerlukan penilaian untuk jangkitan berulang dan diberi rawatan jika didapati ibu berisiko tinggi atau mempunyai pasangan Sifilis positif yang tidak dirawat.

- Semua pasangan kepada ibu Sifilis positif perlu dikesan, diperiksa, menjalani ujian RPR dan TPHA/TPPA serta diberi rawatan.

Rajah 5B: Carta Alir Ujian Saringan Sifilis Ibu Mengandung Semasa Antenatal (Strategi Saringan Menggunakan *Rapid Diagnostic Test*)

Ujian saringan menggunakan RDT bagi kes atau situasi berikut:

(i) *"Hard to reach population"* contohnya Orang Asli, di kawasan pendalaman Sabah atau Sarawak dan lain-lain.

(ii) Klinik Kesihatan /Klinik Ibu dan Anak yang tidak mempunyai kemudahan makmal untuk melakukan ujian RPR/VDRL

(iii) *"Late booker"* pada trimester ketiga (≥ 28 minggu)

(iv) Ibu yang berisiko tinggi

- Pendidikan kesihatan
- Persetujuan saringan (*informed consent*)

- Pengambilan darah untuk ujian RPR/VDRL beserta bacaan titer DAN
- Ujian *Rapid Diagnostic Test (RDT)*

Ujian RDT

Negatif

Adakah ibu *"late booker"* / berisiko tinggi[a]?

Ya

- Ulang ujian selepas 1 bulan jika *"late booker"* ATAU
- Ulang ujian pada minggu ke 28-32 kehamilan jika berisiko tinggi

Tidak

Positif

- Rujuk Pakar Perubatan Keluarga / Pegawai Perubatan untuk memulakan rawatan (dos pertama) pada hari yang sama.

Cont…

Current pregnancy:

- Repeated RPR at 35w POG (26/12/2023): Reactive, Titer **1:16**
- No treatment initiated
- RPR D3 post delivery at HTA (3/1/2024): 1:2

Infant’s history

- Baby born alive via EMLSCS @36w on 31/12/2023 at HTA
- Birth weight : 3210g
- Baby’s serology at birth:

  RPR Reactive, Titer 1:2

  TPPA positive
- No clinical sign
- No long bone X-ray
- No Lumbar Puncture (Mother refused)

- Baby treated with IV C-Penicillin 150,000u for 14 days
- Baby was discharged on 15/1/2024
- Given TCA SCN clinic HTA on 6/3/2024 with repeated VDRL/RPR 1 week prior to TCA

CASE REGISTERED IN E-NOTIFICATION SYSTEM

Reflection for this case

1. Does the mother was treated adequately?

   No.

   Mother is not treated antenatally.

   Partner's current serology unknown.

2. Does baby's RPR taken at delivery?

   Yes, Reactive with titre 1:2

3. Does mother's RPR taken at delivery?

   Yes. Titre 1:2 (taken day 3 post delivery)

4. Does this baby has any clinical signs of congenital syphilis?

   No

5. What is the baby's status?

   Probable congenital syphilis

No recent treatment with suspected new exposure

Case 4- MYHCC 801

- Mrs. NJ, 23 years old, Burmese, Married, Para 1
- LMP: 13/3/2023, EDD: 20/12/2023
- Booking date on 26/6/23 @15w POA at Equine Park Women
- RPR taken on 29.6.2023 @15weeks: NR, TPPA not taken
- Total 6 Antenatal visits

Do you agree with the management?

Will you repeat RPR or RDT syphilis?

Case 4- MYHCC 801

- On 2/12/23 @ at 37 weeks 4 days: Patient presented at Hosp. Serdang
  - EMLSCS for breech in labour with fetal compromised
- Placenta appeared unhealthy, friable and meconium stained
  - HVS C&S: no growth
  - HPE placenta: chronic deciduitis
- Diagnosed with Syphilis 15 days post delivery (HPE placenta- acute deciduitis)
- Clinical staging as Latent Syphilis
- HIV/Hep B/C : Negative

Gestation		VDRL/RPR			TPPA/TPHA		
		(Date)	(Result)	(Titre)	(Sampling Date)	(Result Date)	(Result)
1	15weeks (booking)	29/6/2023	NR		-	-	-
2	15day post delivery	17/12/2023	REACTIVE	**1:128**	17/12/2023	24/12/2023	POSITIVE

TREATMENT REGIME	1ST DOSE	2ND DOSE	3RD DOSE	REMARKS
IM Benzathine Penicillin 2.4 MU	**23/12/2024**	**30/12/2024**	**6/2/2024**	Post treatment RPR - 6/3/2024

husband's History

- Mr. HS/ 28 years old/Burmese
- Multiple sexual partners (2 including wife)
- Claimed treated with IM Benzathine Penicillin 2.4 MU at GP July 2022 but no documentation
- Claims no sexual encounter before marriage

- RPR (17/1/2024) : 1:64
- TPPA (17/1/2023) positive
- Treated in kk on 23/12/23(same as wife)
- HIV -negative

Infant’s history

- Baby born alive/ EMLSCS / term at 37 weeks 4 days on 2/12/2023, Birth weight : 2.19 kg
- First RPR at birth : Non reactive (in view of SGA with thrombocytopenia 3/12/23)
- Second RPR 17/12/23 RPR 1:16.
- TPHA Not sent
- Repeated VDRL 23/12/23-titre 1:4
- CSF VDRL sample rejected d/t blood stain sample
- Long bone x-ray – not done

Infant’s history

- Treat as probable congenital syphilis
- Completed 14 days IV c-penicillin 110,000 TDS
- Neonatal sepsis cover for meningitis with liver impairment with thrombocytopenia
- CRP 152-> 32.6, Blood C&S no growth
- LP 5/12/23 – glucose ratio 1 , protein 1.45 , cell count 0 –no organism seen
- On IV C-pen & IV cefotaxime 2/12/23 upgrade to meningitis dose 5/12/23
- Currently under Peads Hosp Serdang follow up, plan to repeat RPR at 27.2.24

Reflection for this case

1. Does the mother was treated adequately?

   No.

   Mother is not treated antenatally.

2. Does baby's RPR taken at delivery?

   Yes, Reactive with titre 1:16

3. Does mother's RPR taken at delivery?

   Yes. Titre 1:128 (taken day 15 post delivery)

4. Does this baby has any clinical signs of congenital syphilis?

   No

5. What is the baby's status?

   Probable congenital syphilis

Screening not repeated in high risk groups

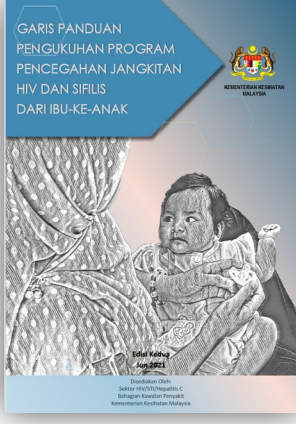
Case 5

- Mrs. LFF, 23 years old, Burmese chinses, G3 P0+2, REDD 24/1/2020
- Booking @ 9 week POG on 10/6/2019
- Unmarried.
- H/o promiscuity.
- H/o induced miscarriage

- Booking HIV RTK: Reactive
- HIV 97 taken on 11/6/2019

- Screened for partner:
  - HIV RTK: non reactive
  - HIV 97: negative

What is your next step?



Rajah 3: Carta Alir Pengurusan dan Rawatan Ibu Mengandung HIV Positif

Ibu Mengandung HIV positif

Baru didiagnosis / HAART *Naive*

- Kaunseling
- Mulakan rawatan HAART tanpa mengira aras CD4
- Jika didiagnosis >28 minggu, pertimbang untuk mulakan Raltegravir (*rujuk ke Klinik Pakar ID)
- Ulang ujian VL pada 32-36 minggu: -Jika VL<50 *copies*: boleh bersalin normal
- VL> 50 *copies: LSCS*
- Teruskan HAART selepas bersalin

Didiagnosis ketika hendak bersalin & belum dimulakan rawatan

- LSCS adalah kaedah bersalin yang disyorkan
- Ibu diberi IV AZT (Zidovudine) (2mg/kg per 1 jam, diikuti dengan 1 mg/kg/h)
- Mulakan rawatan dengan 2NRTI + Raltegravir
- Jika Raltegravir tidak ada, mulakan rawatan dengan 2NRTI + EFV/NVP
- Beralih ke *first line drug* yang disyorkan selepas bersalin

Mengambil HAART

Stabil dengan HAART
(VL<50 *copies)* sebelum mengandung

- Kaunseling
- Ulang ujian *VL* pada 32-36 minggu kehamilan
- Teruskan HAART selepas bersalin

Gagal HAART
*VL > 1000 *copies* selepas dimulakan rawatan selama 3 bulan

- Rujuk Pakar Perubatan ID
- Untuk memaklumkan Pakar Pediatrik
- Jalankan ujian *drug resistant* jika ada
- LSCS pada 38 minggu kehamilan
- Semasa intrapartum, AZT (Zidovudine) diberi
- Teruskan HAART selepas bersalin

- Bayi : Rujuk bayi dengan segera kepada Pakar Pediatrik sebagai kes berisiko tinggi
- Ibu: Rujuk ibu kepada Pakar Perubatan ID/ Pakar Perubatan Keluarga untuk rawatan susulan.

2.2 PENGURUSAN DAN RAWATAN IBU MENGANDUNG HIV POSITIF

2.2.1 Pendidikan kesihatan

- Semua ibu mengandung yang dikesan HIV positif mesti diberikan pendidikan kesihatan (**Lampiran 2**). Pendidikan kesihatan yang diberikan meliputi tentang pematuhan kepada rawatan ART serta jagaan susulan, mencapai tahap *viral suppression*, kepentingan bersalin di hospital berpakar, proses kelahiran, pilihan penyusuan bayi dan rawatan profilaksis untuk bayi.

- Tekankan bahawa keputusan ujian adalah RAHSIA. Namun demikian, kes akan dimaklumkan kepada pihak Pejabat Kesihatan Daerah untuk tujuan kawalan di mana ibu yang dikesan HIV positif akan dihubungi oleh Penolong Pegawai Kesihatan Persekitaran.

2.2.2 Rujukan kes

- Pengurusan kes hendaklah dijalankan secara multidisiplin. Setiap ibu mengandung HIV positif hendaklah dirujuk kepada Pakar Perubatan Keluarga di peringkat jagaan primer DAN seterusnya kepada Pakar O&G DAN Pakar Perubatan Penyakit Berjangkit ATAU Pakar Perubatan Am di *Combined Clinic*. Ibu mesti dimaklumkan mengenai keperluan bersalin di hospital berpakar. Pasukan Pediatrik MESTI dimaklumkan mengenai bakal kelahiran.

- Untuk kelahiran yang tidak dijangka di hospital tidak berpakar, ibu dan bayi perlu dirujuk SEGERA ke hospital berpakar untuk rawatan selanjutnya.

Baru didiagnosis / HAART *Naive*

- Kaunseling
- Mulakan rawatan HAART tanpa mengira aras CD4
- Jika didiagnosis >28 minggu, pertimbang untuk mulakan Raltegravir (*rujuk ke Klinik Pakar ID)
- Ulang ujian VL pada 32-36 minggu: -Jika VL<50 *copies*: boleh bersalin normal
- VL> 50 *copies: LSCS*
- Teruskan HAART selepas bersalin

2.2.4 Kaedah kelahiran dan rawatan susulan

- Perbincangan perlu dilakukan dengan ibu semasa kehamilan mencapai usia 32 ke 36 minggu mengenai pilihan kaedah kelahiran yang sesuai serta selamat.

- Bagi ibu yang telah menerima rawatan ART sebelum kehamilan atau semasa antenatal dan telah mencapai tahap *viral load suppression <50 copies/mL*, mereka boleh memilih untuk bersalin secara normal (SVD) (**Jadual 1**) . Selepas kelahiran, ibu hendaklah disusuli oleh Pakar Perubatan. Manakala untuk bayi, akan disusuli oleh Pakar Pediatrik.

Jadual 1: *Mode of delivery according to viral load quantification*

Viral load at 32-36 weeks	***Mode of delivery***
< 50 copies	*SVD*
50-399 copies/mL	*PLCS recommended**
> 400 copies/mL or unknown viral load	*PLCS*

** Take into account the trajectory of the viral load leading up to time of delivery, length of time on ARVs, adherence issues, obstetric factors and the woman's view.*
SVD: Spontanous vaginal delivery, PLCS: Pre labor caesarian section.
Excerpt from Malaysian Consensus Guidelines on Antiretroviral Therapy, Ministry of Health (2017): Chapter 7 Prevention of Mother-to-Child Transmission (pg. 30).

Cont…

On 14/7/2019 @ 12 wk 4d : under ID f/up

- CD4 count: 339 (18%)
- Started on HAART (TenvirEm I/I OD, EFV I/I OD)

VL taken at 3rd trimester: Not detected

On 25/01/2020, baby born via SVD @40w1d POG

How to manage the baby?

Jadual 2: *Prophylaxis for newborn*

HIV Prophylaxis
Scenario 1: *Infant of HIV infected pregnant mother who is on ART and has sustained viral suppression.* ***Treatment regime:*** *Zidovudin (ZDV) 4mg/kg/dose BD for 4 weeks*
Scenario 2: *Infant at higher risk of HIV acquisition e.g. infant born to HIV positive mother who:* *(a) has not received intrapartum/ antepartum ARV* *(b) has received only intrapartum ARV* *(c) has received antepartum ARV but does not have viral suppression near delivery.* ***Treatment regime:*** *Zidovudin (ZDV) 4mg/kg/dose BD for 6 weeks + Nevirapin 8mg/dose (BW ≤ 2kg), 12mg/dose (BW > 2kg) for 3 doses: at birth, 48 hours of life and 144 hours of life (exactly day 6 of age). Alternatively, use triple ARV regime (ZDV/ Lamivudine/ Nevirapine).*
Notes: *ARV should be served as soon as possible (preferably within 6-12 hours of life) and certainly no later than 48 hours.* *Dose of Sy ZDV for premature baby:* *<30 weeks: 2mg/kg 12 hourly from birth to 4 weeks, then 3mg/kg 12hourly age 4-6 week.* *>30 weeks: 2mg/kg 12hourly from birth to 2 weeks, then 3mg/kg 12hourly age 2-6 weeks.* *If oral feeding is contraindicated, then use IV ZDV at 1.5mg/kg/dose.*
PCP prophylaxis
Co-trimoxazole 4mg TMP/ 20mg SMX/kg daily; *OR* ***150mg TMP/ 750mg SMX mg/m2/day OD for 3 days per week***

Excerpt from Paediatric Protocols for Malaysian Hospitals, 4th edition, Ministry of Health (2019): Management of HIV exposed infants (pg.463).

Cont...

- Intrapartum zidovudine was not given.
- Baby was started on Sy Zidovudine, Sy lamivudine and sy nevirapine.
- Advice for no breastfeeding.

7.5 Intrapartum Intravenous Zidovudine Infusion

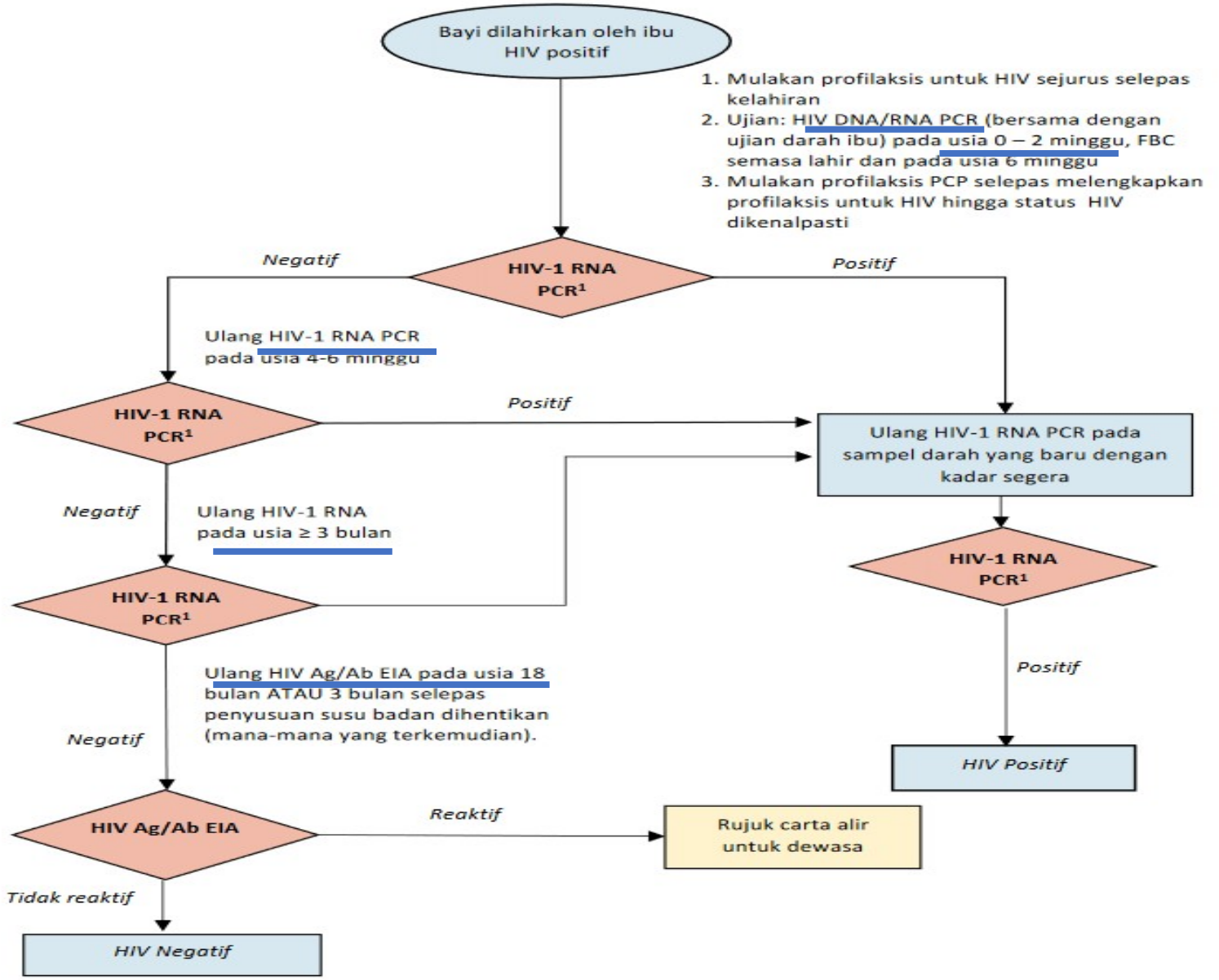
Intrapartum IV Zidovudine (AZT) infusion (2 mg/kg for the 1st hour followed by 1 mg/kg/h subsequently) is recommended for women with a viral load of >1000 copies/mL, who present in labour or with ruptured membranes or who are admitted for planned PLCS. For PLCS, Intrapartum IV Zidovudine (AZT) should be started 3 hours before surgery[4]. Current evidence suggests that intrapartum IV AZT has no additional benefit in prevention of vertical transmission in pregnant women on ART with viral load ≤1000 copies/mL during late pregnancy and near delivery[11].

7.8 Breast-Feeding

Breast-feeding is not recommended as it is associated with risk of transmission up to 14% in those who are not virally suppressed[4,13]. This risk reduces to 1% if the woman is virally suppressed. However, breast-feeding is still not encouraged in our population. For women on ART, compliance must be stressed if they insist on breast-feeding their baby.

How to monitor the baby?

Rajah 4: Carta alir pengurusan dan rawatan bayi yang dilahirkan oleh ibu HIV positif



date	age	HIV RNA PCR	HIV ELISA (CMIA for Ag & Ab)	HIV ELISA (PA for anti HIV)	Anti- HIV (WB)	Viral Load
Jan 2020	1m	ND				
April 2020	3m	ND				
June 2020	5m	rejected				
Aug 2021	1y7m		reactive	NR		
Nov 2021	1y10m		reactive	NR		
Dec 2021	1y11m		reactive			ND
July 2022	2y6m		NR	NR		ND
Aug 2022	2y7m	NEG	reactive	Intermediate	intermediate	
Oct 2022	2y10m		NR	NR		

On 9/11/2022: seen by Paed ID

- Unlikely RVD positive
- Discharge from paed ID clinic f/up

Reflection for this case

1. Early detection of HIV in pregnancy enable for early treatment for prevention of maternal-to-child transmission (PMTCT).
2. A viral load must be done between weeks 32-36 weeks to determine ongoing risk of transmission to fetus and help to determine the mode of delivery.
3. Breast-feeding is not recommended as it is associated with risk of transmission (14% in those not virally suppressed, and 1% in virally suppressed women).

Appropriate treatment and monitoring is important in PMTCT.

Case 6- MYHCC 366

- Mrs. MA/ 35 years old/ Indonesian/ Unknown status/Para 4
- Unbooked
- LMP: USOD, REDD: 27/11/2023 (by scan)
- Risk factor: Unknown
- On 22.11.2023: Arrived at Labour room with Os fully

What is your next step?

Rajah 2: Carta Alir Ujian Saringan HIV Ibu Mengandung Semasa Intrapartum

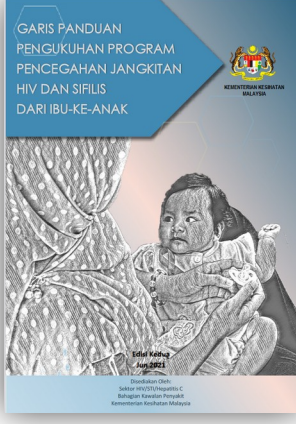
Cont…

- HIV Rapid test done upon arrival at Labour Room on 22.11.2023 : **Positive**
- HIV ab : Not available
- CD4: Not available
- Viral load (22/11/23): 148716

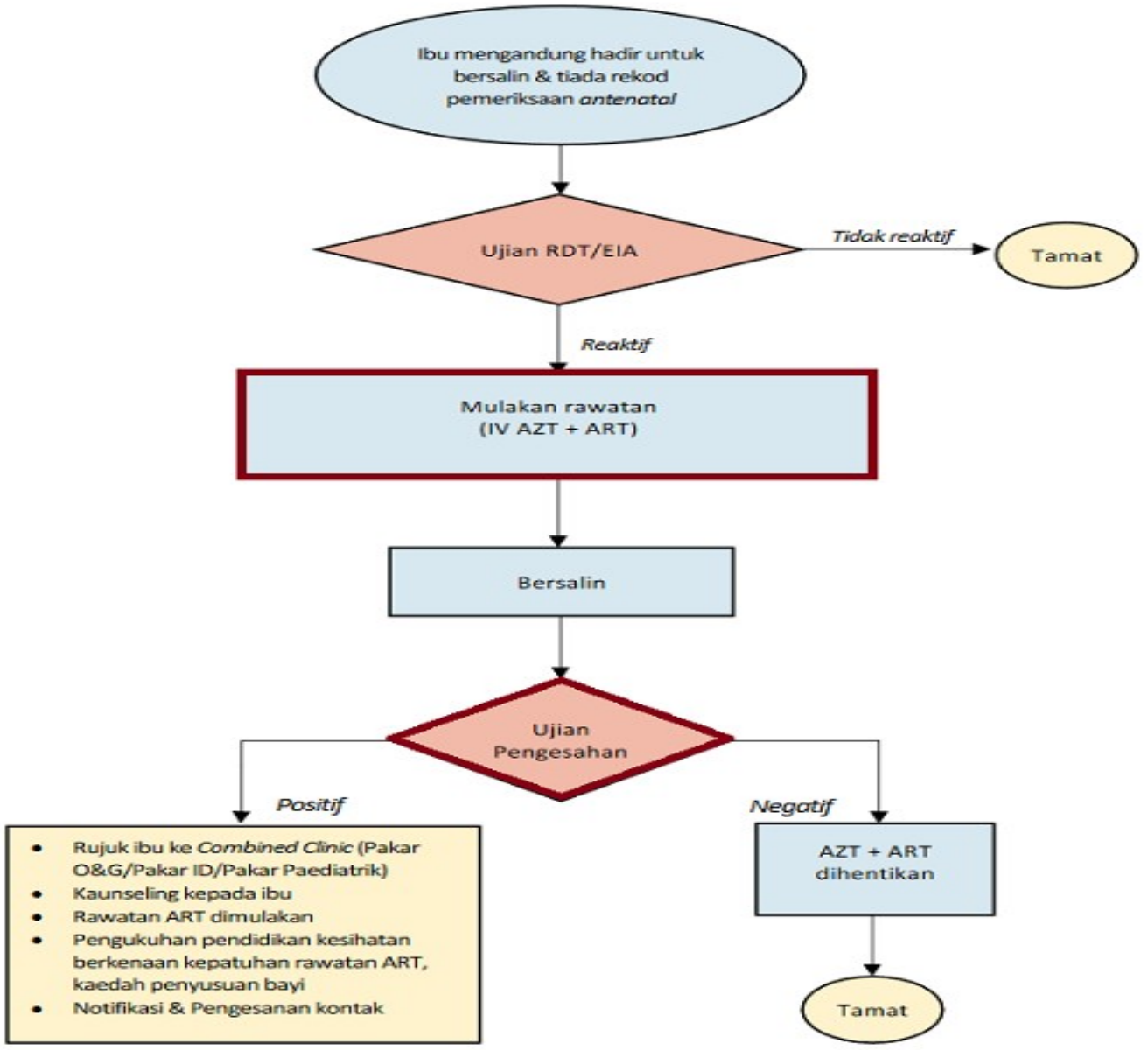
How will you manage this case?

<u>Partner History:</u>

- African / Denied multiple partner/ Drug abuse
- Unsure of RVD status



Rajah 2: Carta Alir Ujian Saringan HIV Ibu Mengandung Semasa Intrapartum



Rajah 3: Carta Alir Pengurusan dan Rawatan Ibu Mengandung HIV Positif

Ibu Mengandung HIV positif

Baru didiagnosis / HAART *Naive*

- Kaunseling
- Mulakan rawatan HAART tanpa mengira aras CD4
- Jika didiagnosis >28 minggu, pertimbang untuk mulakan Raltegravir (*rujuk ke Klinik Pakar ID)
- Ulang ujian VL pada 32-36 minggu: -Jika VL<50 *copies*: boleh bersalin normal
- VL> 50 *copies: LSCS*
- Teruskan HAART selepas bersalin

Didiagnosis ketika hendak bersalin & belum dimulakan rawatan

- LSCS adalah kaedah bersalin yang disyorkan
- Ibu diberi IV AZT (Zidovudine) (2mg/kg per 1 jam, diikuti dengan 1 mg/kg/h)
- Mulakan rawatan dengan 2NRTI + Raltegravir
- Jika Raltegravir tidak ada, mulakan rawatan dengan 2NRTI + EFV/NVP
- Beralih ke *first line drug* yang disyorkan selepas bersalin

Mengambil HAART

Stabil dengan HAART
(VL<50 *copies)* sebelum mengandung

- Kaunseling
- Ulang ujian *VL* pada 32-36 minggu kehamilan
- Teruskan HAART selepas bersalin

Gagal HAART
*VL > 1000 *copies* selepas dimulakan rawatan selama 3 bulan

- Rujuk Pakar Perubatan ID
- Untuk memaklumkan Pakar Pediatrik
- Jalankan ujian *drug resistant* jika ada
- LSCS pada 38 minggu kehamilan
- Semasa intrapartum, AZT (Zidovudine) diberi
- Teruskan HAART selepas bersalin

- Bayi : Rujuk bayi dengan segera kepada Pakar Pediatrik sebagai kes berisiko tinggi
- Ibu: Rujuk ibu kepada Pakar Perubatan ID/ Pakar Perubatan Keluarga untuk rawatan susulan.

Rajah 3: Carta Alir Pengurusan dan Rawatan Ibu Mengandung HIV Positif

Ibu Mengandung HIV positif

Didiagnosis ketika hendak bersalin & belum dimulakan rawatan

- LSCS adalah kaedah bersalin yang disyorkan
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- Jika Raltegravir tidak ada, mulakan rawatan dengan 2NRTI + EFV/NVP
- Beralih ke *first line drug* yang disyorkan selepas bersalin

- Bayi : Rujuk bayi dengan segera kepada Pakar Pediatrik sebagai kes berisiko tinggi
- Ibu: Rujuk ibu kepada Pakar Perubatan ID/ Pakar Perubatan Keluarga untuk rawatan susulan.

Cont…

- IV Zidovudine was not given as patient already in active stage of labour
- Started on ART on 24/11/23 (2 days post delivery)

Infant's history:

- Baby born SVD on 22/11/2023 at 38 weeks POG
- Birth weight 2.92kg

How to manage the baby?

Jadual 2: *Prophylaxis for newborn*

HIV Prophylaxis
Scenario 1: *Infant of HIV infected pregnant mother who is on ART and has sustained viral suppression.* ***Treatment regime:*** *Zidovudin (ZDV) 4mg/kg/dose BD for 4 weeks*
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PCP prophylaxis
Co-trimoxazole 4mg TMP/ 20mg SMX/kg daily; *OR* ***150mg TMP/ 750mg SMX mg/m2/day OD for 3 days per week***

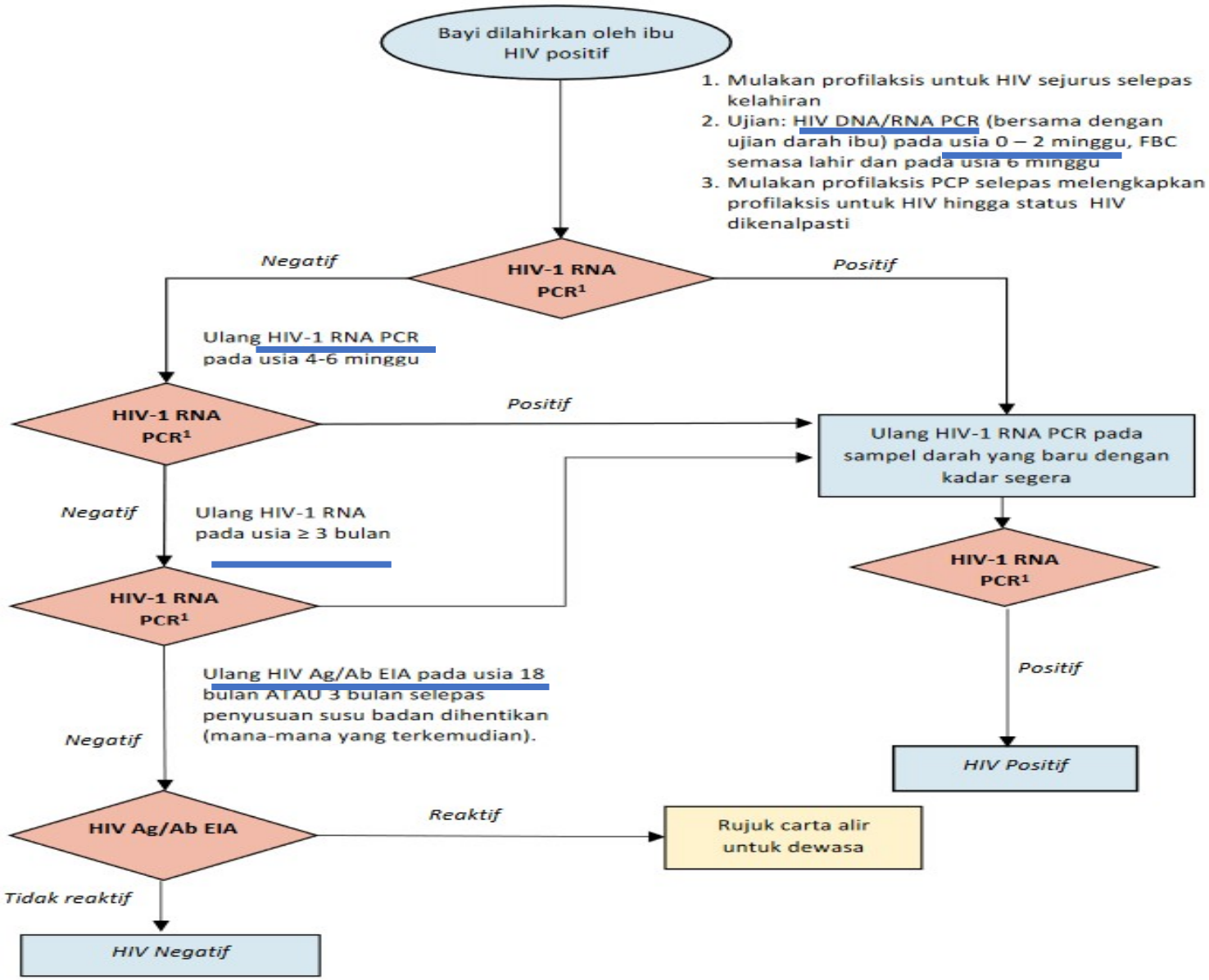
Excerpt from Paediatric Protocols for Malaysian Hospitals, 4th edition, Ministry of Health (2019): Management of HIV exposed infants (pg.463).

Infant’s history, cont…

- Nevirapine given 12mg at birth

- 1st PCR at birth: Not Detected
- 2nd PCR @7/52 of life (11/1/2024): Not Detected
- 3rd PCR @ 3/12 – appt on 19/2/24

Rajah 4: Carta alir pengurusan dan rawatan bayi yang dilahirkan oleh ibu HIV positif



Reflection for this case

1. All pregnant women who are unbooked/unscreened or without any HIV screening documentation, need to be screened for HIV immediately in labour room.
2. IV Zidovudine should be given immediately for a woman newly diagnosed with HIV infection presenting in labour.
3. ART should be commenced immediately with 2NRTI + Raltegravir. If Raltegravir not available, start with 2NRTI + EFV/NVP.Switch back to first line treatment after delivery.
4. Refer baby immediately to pead for early treatment and monitoring for PMTCT.

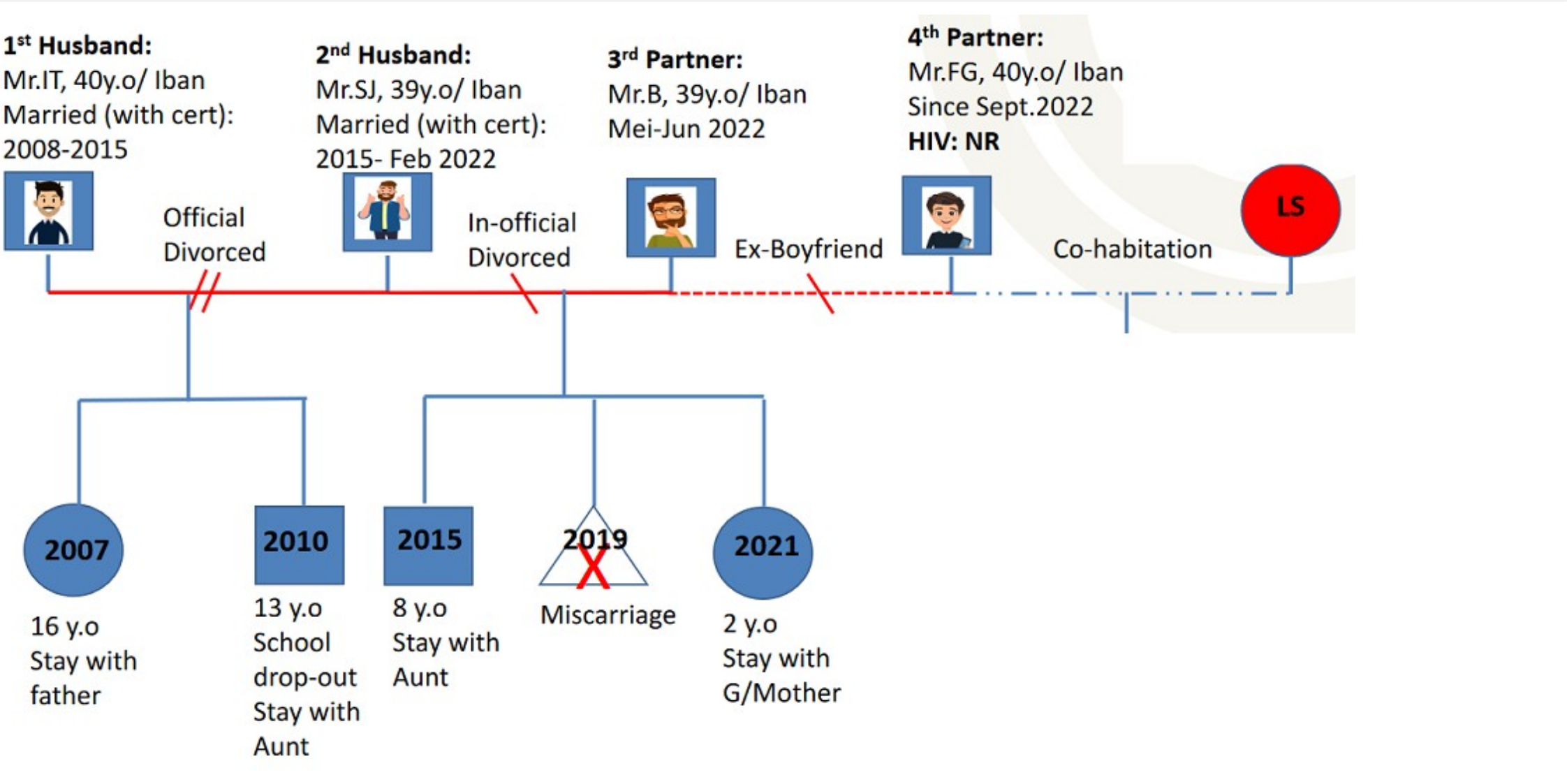
Screen all unbooked/ unscreened pregnant women

Case 7

- Mrs. LS, 36 years old, G6 P4+1
- USOD, REDD 13.9.2023
- Booking @ 11 week POG @ KK Bt. Kawa
- Booking HIV RTK: NR
- USG: Twin pregnancy MCDA
- F/up at ANC KK & MFM

Is there anything that you concern?

Yes. We need to assess the risk factors and also past obstetric history.


1st Husband:
Mr.IT, 40y.o/ Iban
Married (with cert):
2008-2015
2nd Husband:
Mr.SJ, 39y.o/ Iban
Married (with cert):
2015- Feb 2022
3rd Partner:
Mr.B, 39y.o/ Iban
Mei-Jun 2022
4th Partner:
Mr.FG, 40y.o/ Iban
Since Sept.2022
HIV: NR
Official
Divorced
In-official
Divorced
Ex-Boyfriend
Co-habitation
LS
2007
16 y.o
Stay with
father
2010
13 y.o
School
drop-out
Stay with
Aunt
2015
8 y.o
Stay with
Aunt
2019
Miscarriage
2021
2 y.o
Stay with
G/Mother

CASE INVESTIGATION REPORT

Disease Conrol Division
Ministry of Health

Feb 2022 – Aug 2022	➢Separated from 2nd Partner. Unable to finalize divorce in view of irreconcilable differences and financial constraint. ➢Mdm LS went on to work at Kopitiam Happiness at Junction 5 in Bintulu. Staying at a staff room provided by employer. ➢**Met 3rd Partner, Mr B** ➢Had unprotected sex more than 5 times ➢Relationship lasted for 1 month, then separated
Sept – Dec 2022	➢**Mdm LS met 4th Partner at Smoke House BBQ** ➢**Move in together**
Jan 2023	➢**Mdm LS follow partner move to Batu Kawa, Kuching to work** ➢**Stayed at Rh Pekerja Vision Height (Contractor Site), Batu Kawa**
Feb 2023	➢**Booked pregnancy in MCH Batu Kawa, Kuching** ➢USOD, G6P4+1A. REDD 13/09/2023 (11W POG). Twin pregnancy MCDA ➢Antenatal biohazard screening done on 9/2/2030: all non reactive ➢Continue antenatal follow up in MCH Batu Kawa, Kuching & MFM SGH

Cont…

- On 5/7/2023 @ 30 weeks POG: noted Twin 2 no FH
  - Imp: MCDA twin with single twin demise
- On 23/8/2023 @ 37 week 1 day : SVD, BW 2.05kg
- On 25/9/2023: f/up at Kk for 1 month old child health care (Healthy baby)
- On 24/10/2023: f/up at KK 2 month old child health care (Healthy baby)

Cont…

- On 9/11/23 @ 2 month old:
  - presented with symptoms of Acute Respiratory Illness
  - baby admitted to Hospital Mukah
  - Treated as Acute Bronchiolitis covered for Bronchopneumonia
  - However, symptoms worsening
- On 12/11/2023: Referred to H. Bintulu
  - Main diagnosis:

  Severe pneumonia

  Failure to thrive (admission weight: 3.57kg)

  Anemia
- On 22/11/2023:
  - Mdm LS tested for **HIV positive**. Partner HIV negative.
  - Baby's HIV PCR taken, result pending
  - Baby discharge and give appt at Paeds Daycare on 19/12/2023

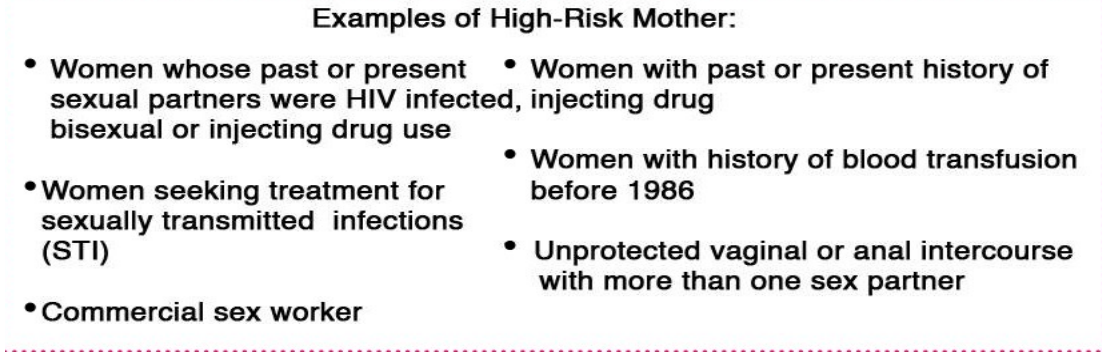
Cont…

- On 19/12/2023: Seen at Paeds Daycare
  - HIV PCR result(22/11/2023): Detected (Result come back on 12/12/2023)
  - Started on HAART (Sy Zidovudine, Lamivudine, Nevirapine)
  - Started on PCP prophylaxis
  - Change feeding from BF to formula feeding
  - Given ID clinic appt for mother and other siblings on 10/1/2024
  - Case was notified on 30/12/2023
- Baby's CD4 (7/1/2024): 1168
- Mother's CD4 (11/12/2023): 190

Reflection for this case

1. History taking is important!

   Assess the risk factor to identify High-Risk Mother.



2. Failure to identify High-Risk Mother leads to inadequate screening for HIV/syphilis.

   Subsequently lead to failure of HIV detection in pregnancy and no ART is given to prevent maternal-to-child transmission (PMTCT).

History taking is important!


Thank you for your
attention!