Worthy Works
Medical Education

PREVENTION OF MOTHER TO CHILD TRANSMISSION OF HEPATITIS B

Worthy Works Ltd

3RD Session Online Learning Modules by Dr Nimzing Ladep
Consultant Hepatologist

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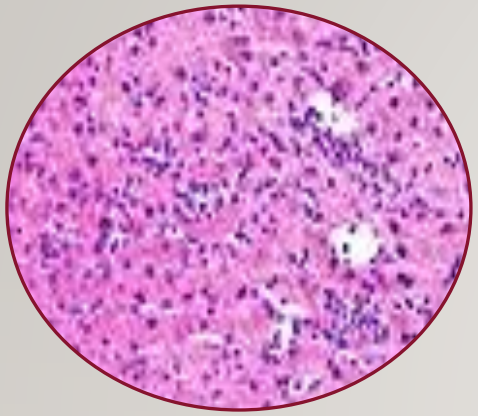
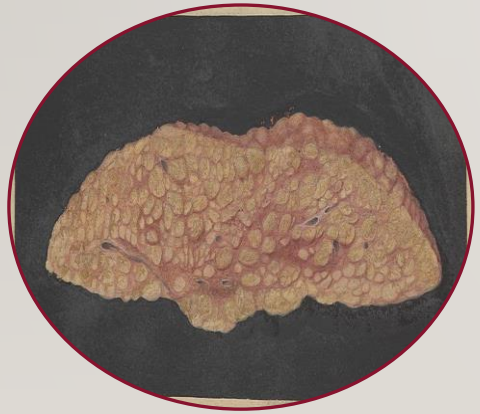
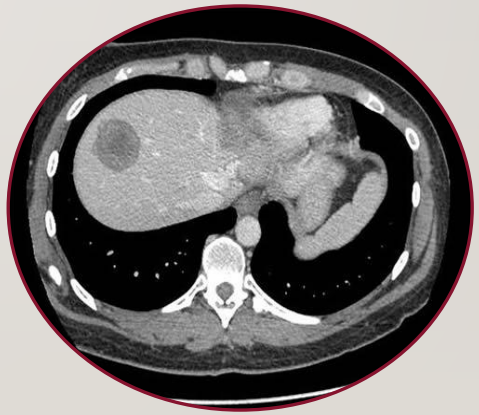
Hepatitis B virus infection is globally important, as more than 2 billion persons have been exposed to it at some point in their lives

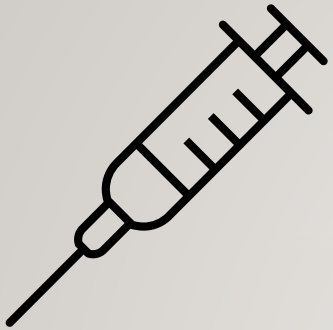
About 300 million persons are chronically infected by hepatitis B virus



Hepatitis B kills by causing fulminant hepatitis failure, cirrhosis and liver cancer







The good news is that an effective vaccine is available, and which has been shown to effectively decrease the transmission of infection as well as liver cancer

For those already infected, effective antiviral agents are available to suppress viral replication and thus decrease incidence of cirrhosis and liver cancer

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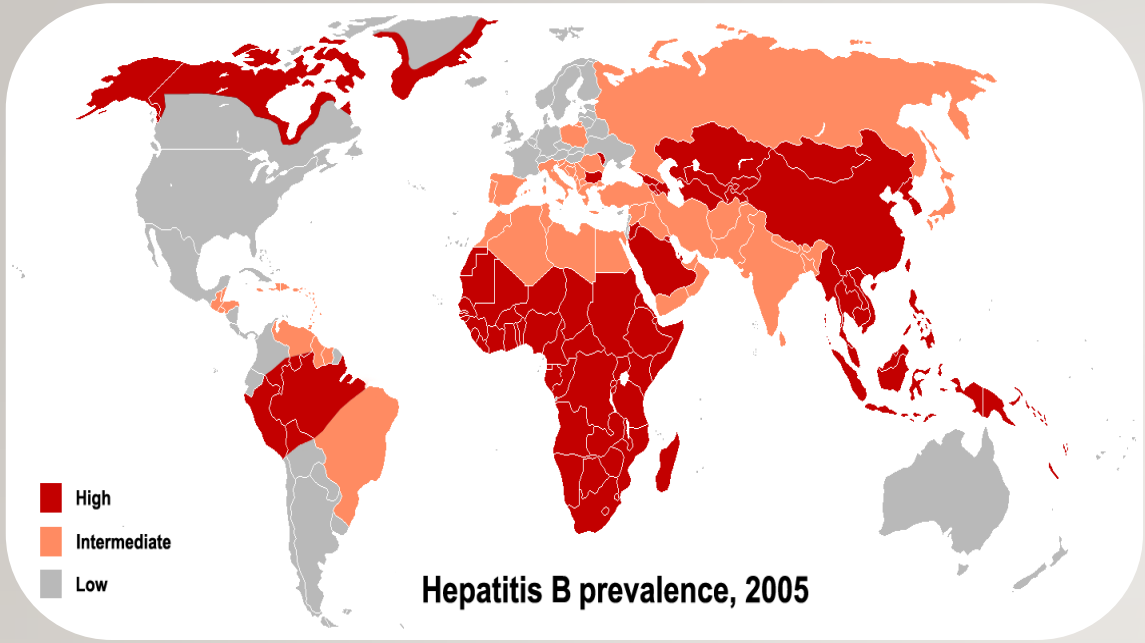
The bad news is, there remains a population of those that are chronically infected who can transmit the infection to their unborn babies if they are not targeted and provided treatment in a programmatic fashion



Perinatal transmission of HBV is known to fuel ongoing infection in developing countries, and which might mitigate the WHO goal to eliminate HBV by 2030

Mother to child transmission of hepatitis B is one of the commonest modes of transmission of this deadly disease

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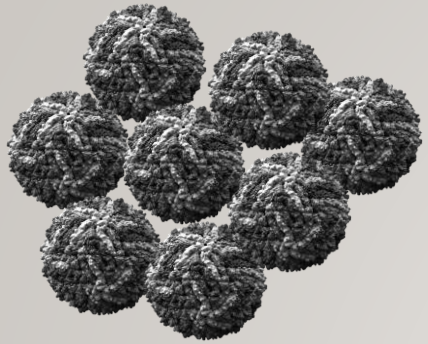
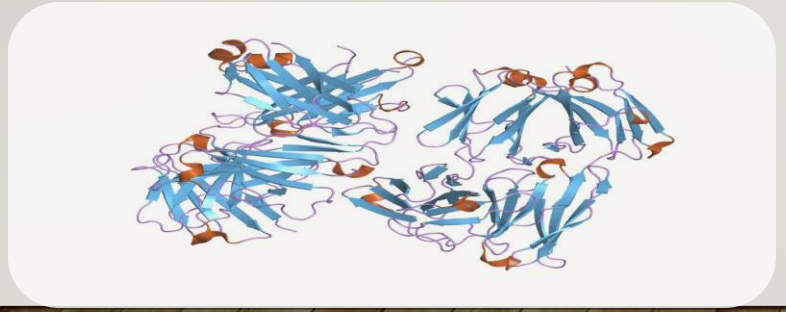


>200,000 IU/mL



The risk a mother has, to transmit hepatitis B virus to her baby is highest if the mother has any of the following: HBeAg +ve, HBV viral load above 200,000IU/mL, Child does not have a first dose HBV vaccine within 12hrs of birth, and Non availability of Hepatitis B immune globulin

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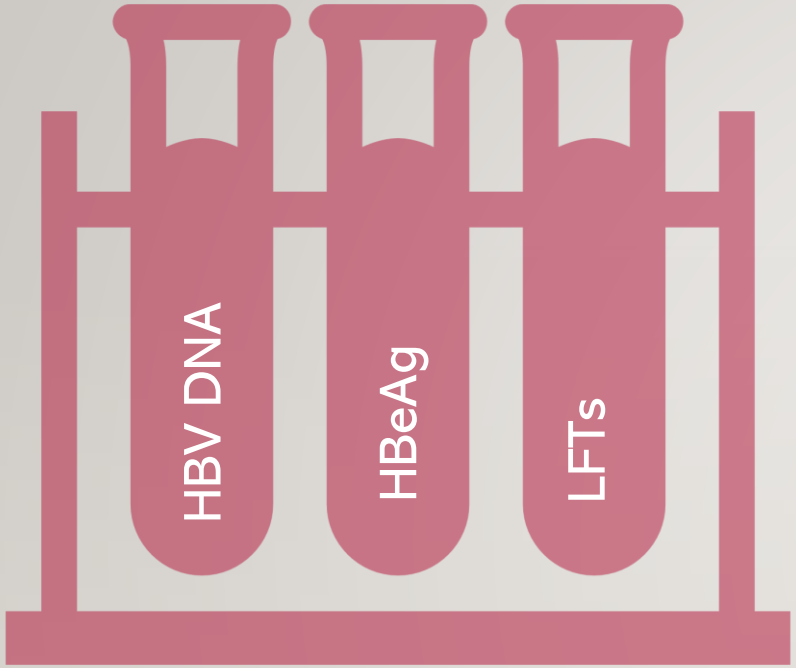
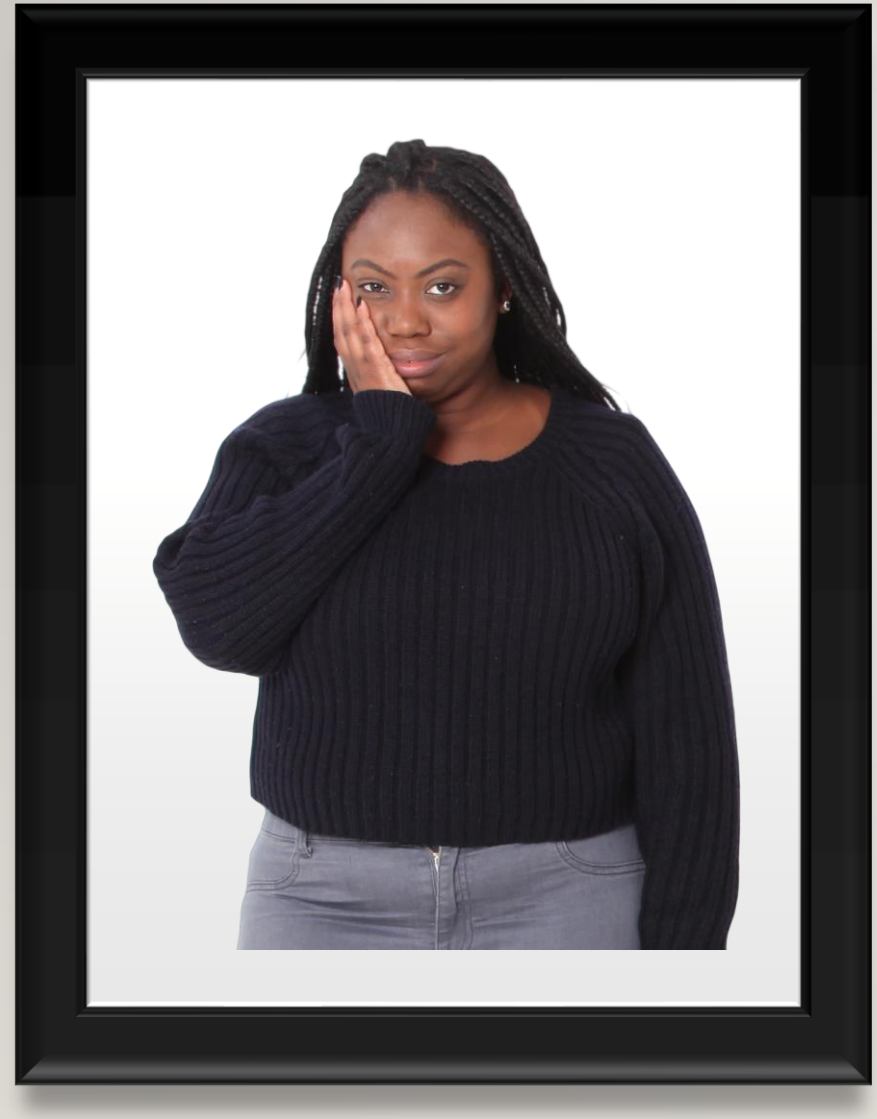
To ensure the risk of transmission is reduced, test all mothers (in endemic regions) for HBsAg at their first antenatal visit (to book their pregnancy)



If mother is found to be positive to HBsAg, perform additional tests to determine the relative risk of transmission of HBV to her baby – includes HBV DNA, HBeAg and Liver Chemistry (ALT)

If HBeAg is positive, or abnormal ALT elevation and or HBV DNA is >200,000 IU/mL, start antiviral treatment from week 28



- If mother has a low HBV DNA (viral load) in their first 13 weeks of pregnancy, then repeat viral load at weeks 26 – 28 – and treat as suggested above

- Mothers without evidence of hepatitis B infection or exposure (negative for anti-HBs and anti-HBc) should be vaccinated
- Especially if her partner is HBsAg +ve

Mothers that come to deliver and who did not have antenatal care and whose status have not been determined previously should be tested for HBsAg at the time of delivery (and baby managed as will be advised below)

Provide passive/active immunisation to the infant (baby at birth) – includes hepatitis B immune globulin (HBIG) and HBV vaccine

Tenofovir is considered the safest drug to use in pregnancy as it is considered the safest, relative to other agents, as well as the fact that HBV resistance to it is lowest

Primary prevention of HBV

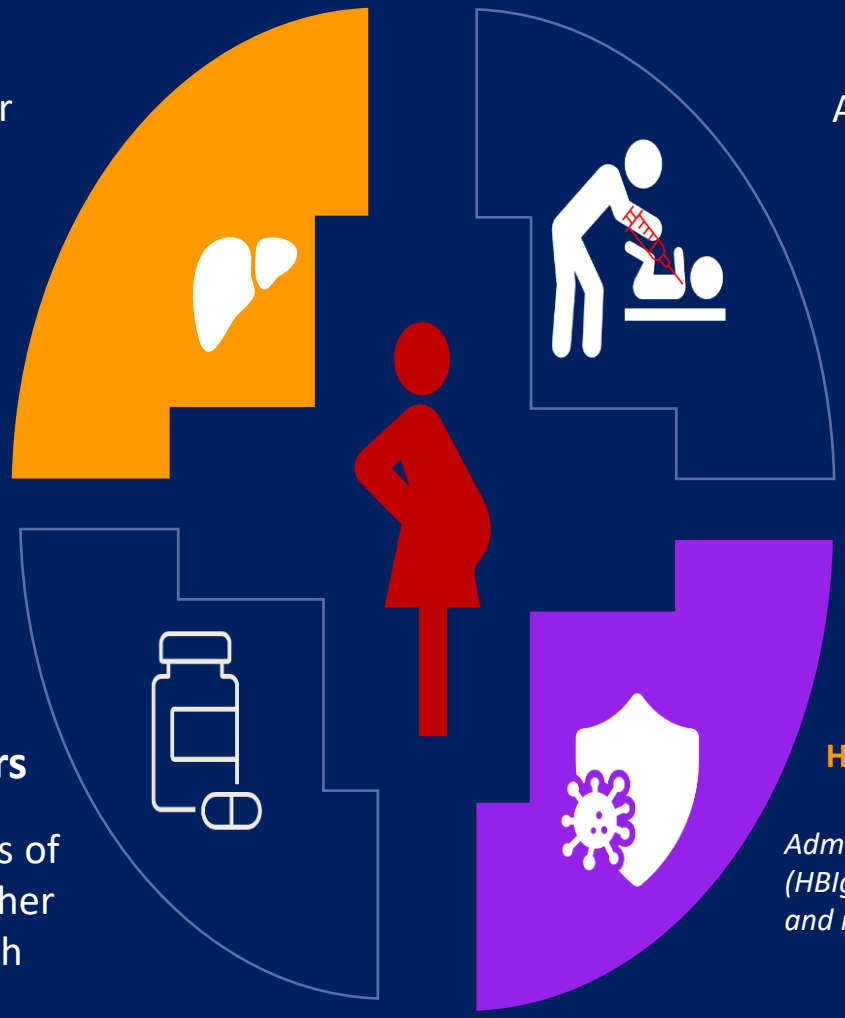
Prevention of mother to child transmission of HBV

Change medication

If mother was on entecavir, or any other before pregnancy, switch to tenofovir

Vaccinate

Administer hepatitis birth dose vaccine to babies born in high endemic area of Africa



Pregnancy Booking

Screen all pregnant mothers for hepatitis B at 1st antenatal attendance

HBIgs within 14 days

Administer hepatitis B immunoglobulin (HBIgs), if available - this is too expensive and not routinely available

Treat HBV positive mothers

Start Tenofovir from 28 weeks of gestation if HBV positive mother is HBeAg positive or has a high viral load (HBV DNA)

Prevention of mother to child transmission of HBV

Offer HBsAg testing to pregnant women at booking

HBsAg -ve

HBsAg +ve

Go to next slide for further guidance

Prevention of mother to child transmission of HBV

HBV DNA VIRAL LOAD OR HBeAg (if HBV DNA is unavailable)
AND ASSESS FOR CIRRHOSIS

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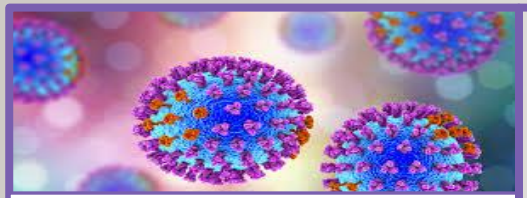
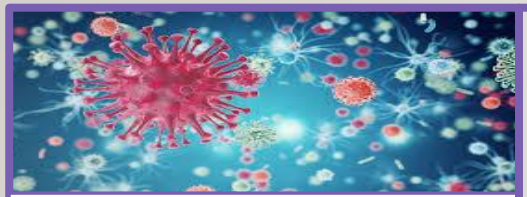
Investigation outcome	Action for mother	Action for baby
 **HBV DNA <200 000 IU/mL or HBeAg negative, without cirrhosis**	**NO MATERNAL TENOFOVIR PROPHYLAXIS** ***DEFER** LONG-TERM MATERNAL TENOFOVIR TREATMENT BUT MONITOR AND REASSESS (as per WHO HBV treatment guidelines)	
 **HBV DNA ≥200 000 IU/mL or HBeAg positive, without cirrhosis**	**START MATERNAL TENOFOVIR PROPHYLAXIS** (from 28 weeks of pregnancy until at least birth) • **REASSESS FOR** LONG-TERM MATERNAL TENOFOVIR TREATMENT AFTER DELIVERY AND MONITOR	
 **Presence of cirrhosis, OR HBV DNA >200 000 IU/mL + Persistently abnormal ALT**	**START** LONG-TERM MATERNAL TENOFOVIR TREATMENT AND MONITOR (as per WHO HBV treatment guidelines)	

HBV birth dose vaccine and complete the rest of series;

HBIG (if available) for infants born to HBsAg mothers (esp if high viral load or HBeAg +ve)

Women who start tenofovir during pregnancy for the purpose of preventing mother to child transmission may stop antiviral therapy immediately after delivery

Stopping antiviral therapy is particularly necessary if they want to breastfeed

Some liver specialists, together with the obstetricians may prefer continuing treatment for 4 to 12 weeks post-partum (after delivery)

ALT should be monitored 3-4 months (if baseline was abnormal) after cessation of treatment

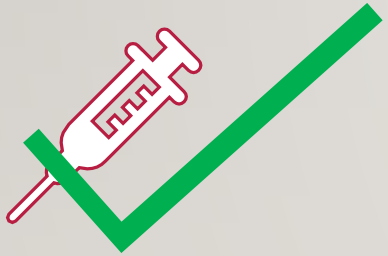
If the pregnant mother was already deemed to have need for treatment as per adult recommendations, then treatment does not need to stop.

It should be continued, and the patient put in the pool of follow up by their liver specialist

HBV transmission is not common when the mother breast feeds her baby (especially, if the baby received the birth dose vaccine and completed the series).

But if there is suspected nipple injury, and risk of bleeding from the breast, then formula feed is recommended

~~HBIG~~



If there is unavailability of HBIG, then going ahead with HBV vaccine for the baby is not optional

SUMMARY

- Hepatitis B is not an uncommon disease globally
- Its menace is most felt in developing countries, where deaths from cirrhosis and liver cancer are highest
- Most common route of transmission of HBV in developing countries is mother to child (vertical)
- Effective treatments and vaccination against HBV are available
- Prevention of mother to child transmission of HBV requires a programmatic intervention
- Targeted interventions will be required, if elimination of HBV is to be achieved by 2030

Course Completed!

We have come to the end of the free sessions and shall be planning further sessions.

This may be in the form of block lectures and covering large aspects (all free) and with downloadable materials (at a fee)

You shall be receiving an email update as soon as we have concluded plans in the next few days.

I look forward to welcoming you to our block courses, quizzes and certifications – www.worthy-works.com