TRIPURA TOWARDS HEPATITIS B ELIMINATION:

A SUCCESS STORY OF HEPATITIS FOUNDATION OF TRIPURA



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Liver is seat soul. For thousands of year Liver is known to be one of the most important organ of body. Liver has got enormous regenerative capacity. But still small Hepatitis viruses can destroy liver. There are five Hepatitis Viruses, these are Hepatitis A, B, C, D, & E. Out of these B and C are most harmful as they can lead to chronic complication like chronic liver disease, Cirrhosis and liver cancer. Among these prevalence of Hepatitis B is highest and it can cause both acute and chronic liver disease. Though The Hepatitis B virus was discovered in 1965. Hepatitis B is very much vaccine preventable by a highly effective and safe recombinant DNA vaccine, which was easily available since 1990 but response from most of high disease burden country were not satisfactory.

It is only in May 2016; the World Health Assembly adopted the first *Global health sector strategy on viral hepatitis*, 2016–2020. The strategy highlighted the critical role of universal health coverage and sets targets that align with those of the Sustainable Development Goals. The strategy proposed the elimination of viral hepatitis as a public health threat by 2030 (defined as a 90% reduction in new chronic infections and a 65% reduction in mortality, compared with the 2015 baseline), and included a roadmap towards elimination by implementing key prevention, diagnosis, treatment and community interventions strategies. In May 2022 the 75th World Health Assembly noted a new set of integrated global health sector strategies on HIV, viral hepatitis and sexually transmitted infections for the period of 2022–2030. Based on these previous and now new strategies, a broad range of Member States have developed comprehensive national hepatitis programmes and elimination strategies guided by the global health sector strategy.

But Tripura, small state of North Eastern region of India, having an area of 10,492 km² out of which two third is difficult terrain took a advanced strategy to make the people aware and vaccinate, screen and treat Hepatitis B patients, to reduce Hepatitis Burden.

This out of the box program was conceived, Conceptualized and materialized by Hepatitis Foundation of Tripura, a social organization working in the field of liver disease since 28th July 2002, with heterogeneous Voluntary membership of about 1400, consisting of Doctors, Nurses, Engineers, Social activists, health care providers, teachers, administrators, businessman and others. The foundation has got 35 branches in the state covering up to all sub districts and community health centre level.

The basic aim of Hepatitis Foundation of Tripura since very beginning is "Hepatitis Free Tripura" by adopting the norm of "Awareness, Immunization and Diagnosis & Treatment".

Scenario of Hepatitis B in Tripura: The total population of Tripura is around 40 lacs (predicted) and out of this 31% are from aborigine group.

The average prevalence of Hepatitis B in Tripura is 3.6%. It is much higher among the tribal groups (5.3 %) in comparison to non tribal community (1.97 %). Chakma community is having highest Hepatitis B prevalence of 11.4 %, followed by Reang (7.69 %), Noatia (6.09 %), Jamatia (5.7 %), Murasing (5.15 %) Tripuri (4.9%) Halam (4.21%) & Lusai (2.74%)

The commonest cause of chronic liver disease in Tripura is Hepatitis B.

Prevention of Hepatitis B:

Prevention of Hepatitis B is of paramount public health importance in the state of Tripura. Hepatitis B is a vaccine preventable Disease hence mass Hepatitis B vaccination can definitely reduce the burden of Hepatitis B in Tripura.

There was no "Hepatitis B vaccination Program" at Government level. At private level Hepatitis B vaccine was highly expensive before 2002.Hence, Hepatitis B vaccination was the prime objective of Hepatitis Foundation of Tripura since very beginning (2002), through community awareness development. The vaccination was started at a subsidized rate at Government hospitals on every Sunday (holiday) during 9AM to 1 PM.

Hepatitis B vaccination movement at Tripura:

Hepatitis Foundation of Tripura though started Hepatitis **B** vaccination as early as 2002 but it was in a limited area and limited way. Gradually the vaccination program got momentum and with the help of Government and people it has become a public health movement and received acceptance at every level.

The vaccination program from 2002 – 2019 can be divided into four phases:

- Inception Phase: 2002 to 2008.
- Hepatitis B Eradication Program: 2009 to 2011.
- At Birth Hepatitis B vaccination Program 2011.
- Maintenance vaccination Program: From 2012

Inception phase: 2002 to 2008: During this period the foundation continued to expand its activity from state capital Agartala to District and Sub district level. Accordingly awareness program and vaccination increased gradually.

Hepatitis B eradication program: This is a historical program of Hepatitis Foundation of Tripura. For three consecutive years (2009, 2010 & 2011) Hepatitis B vaccination program was carried out across the state on a single day establishing almost 200 vaccination canters. The program was preceded by mass awareness program utilizing all possible modalities of dissemination of information education & communication. In 2009 on one single day (29th November 2009) about 1.21 lacs people were vaccinated in Tripura. The program was well accepted at urban and rural area alike. In subsequent years also the vaccination program got similar success. This is the first mass and

pulse Hepatitis B vaccination program organised successfully across the state.

At Birth Hepatitis B vaccination program – 2011: On 7st January 2011, the foundation launched a new program "Free at Birth Hepatitis B vaccination Program". The vaccination was carried out in all Govt. Hospitals. All new born children were receiving Hepatitis B vaccine at Hospital, followed by second and third dose after discharge at 1 and 6 months at clinics of Hepatitis Foundation of Tripura. This is first mass At birth Hepatitis B vaccination program in India.

On 5^{th} December, 2011, the Government of India took over the program, as a national program. Since then the at birth (0 – 1 year) Hepatitis B vaccination program being carried out at all Govt. Hospitals by the Govt.

Maintenance vaccination program: from 2012 (targeted vaccination): After the success of mass vaccination program the Foundation shifted the attention to targeted areas by taking the special program. "Target area vaccination" like Municipality area, Block area, Gram Panchayet and specific Tribal area (Autonomous District Council Area). The program continued up to August 2019. After 26 August 2019 this historical program was forcefully and abruptly discontinued and lacs of people were deprived of benefit of Hepatitis B vaccination through this program. The movement was aborted suddenly, short of making a global history.

Awareness Program and Self Vaccination Initiative: Though the vaccination program was forcefully discontinued but the importance of adult Hepatitis B vaccination is now known to everybody and people continued to receive vaccine from commercial canters. The

awareness and health education program of Foundation continued across the state of Tripura.

Prevention of Mother to Child Transmission: Perinatal transmission is one of the commonest route of Transmission of Hepatitis B. Three important mode of Prevention of transmission are:

1. Screening and treatment of mother if required.

2. At birth Hepatitis B vaccination to the new born.

3. At birth Hepatitis B Immunoglobulin to the new born.

Hepatitis foundation of Tripura is supporting this initiative since very beginning. Foundation is assisting the people in getting low cost immunoglobulin. Thus foundation is instrumental in reducing new infection.

National Viral Hepatitis Control Program: This wonderful program was initiated on 28 July 2018 at national level and in Tripura on 28 July 2019. The foundation and its associate group LIVER PATIENT NETWORK (LPN) is instrumental in materialisation of this program across the state and trying to connect the people with this initiative to get treatment of Hepatitis B, Hepatitis C and other benefits.

Liver Clinic of HFT: Liver clinic of HFT is running in HFT central office since 2008. The basic purpose of this clinic is to investigate Hepatitis B at low cost from canter of excellence and to provide free counselling and treatment facility to the patients in need. Subsequently patients are provided low cost medicines too. This clinic is still continuing on Monday. Wednesday and Friday afternoon.

Result:

Up to August 2019 Hepatitis Foundation of Tripura, a non government Social organization has vaccinated about 14.2 lacks people in Tripura in its own initiative. The total population covered till August 2019 was almost 37% of total population of Tripura. Another around 5 lacks children (12 % of total Population) has been vaccinated at Govt. level in last ten years. (At Birth Vaccination as a part of Govt Program). It shows around 50 % population of Tripura are vaccinated .Around 21 % population are elderly and does not necessarily require vaccination against Hepatitis B. Hence only 29 % of people need active vaccination at this stage. New born children will expectedly be vaccinated at birth and subsequently under expanded program of Immunisation with other vaccines. So Tripura is having very high Hepatitis B vaccination rate due to involvement of NGO and public participation.

Sustainable Development Goals of Viral Hepatitis Elimination and Tripura : Different WHO member countries are working on hepatitis control strategies to achieve hepatitis elimination defined as a 90% reduction in new chronic infections and a 65% reduction in mortality, compared with the 2015 baseline. So far, only 12 countries are on track to achieve hepatitis elimination targets as a public health threat by 2030.

It has been categorically observed that combined efforts of universal vaccination, antiviral treatment and interruption of transmission make elimination of HBV infection plausible and eventually may result in the eradication of HBV. In fact hepatitis foundation of Tripura is working on these principal of eradication since inception following norm of awareness generation, screening, treatment, prevention of

transmission like mother to child and in the hospital and most importantly mass vaccination.

Tripura got the result of all these interventions. According to study in 2012 among hospitalized liver patients Hepatitis B patients were 48.6% but in 2018 it reduced to10.75 %. In another study it was observed that among voluntary healthy blood donors Hepatitis B was 1.59 % in 2005 - 2006, whereas it significantly reduced to 1.02 % in 2017 - 2018. It has clearly shows that Tripura is much ahead in achieving the Elimination strategy.

Hepatitis Foundation has a goal as 2025 to achieve the strategic target. As the foundations TRIPURA MODEL of hepatitis B elimination has been prematurely and forcefully discontinued, the foundation has strongly submitted to the state government to immediately initiate adult Hepatitis B program and help the people of Tripura to be HEPATITIS FREE. Hopefully the Govt will consider the voice of people. The Foundation will keep no stone unturned to make the people aware and will reach to everyone.

Governmental help:

The State Govt. has extended enormous Logistic supports. The Govt. allowed the Foundation to utilize Govt. Health Institution on all Sundays (Holiday). The Govt. Health care providers participated in the vaccination program selflessly and regularly. The ministers of the state, legislators and elected body members have extended all possible support by participating in awareness program.

Support groups:

Corporate philanthropy like Bristol Meyers Squibb Foundation, World Hepatitis Alliance, an international social organisation extended helping hand in awareness generation program. Many other Non Government organizations of the country and state extended direct and indirect support. Various democratic organisations of students, youth and women, clubs, trade unions, employ organisations helped in this program. In fact this program became a People's heath movement against Hepatitis B.

Media participation:

Print and electronic media of state extended help for propagation of the message to the people.

CONCLUSION:

The mass Hepatitis B vaccination as an initiative of Non Govt Social organization is a wonderful experience and success story of public health movements.

It generates enthusiasm among the participants. The support by Govt. and society as a whole is a must for success of mass health movement. This many act as template for various health programs. This Tripura model of mass Hepatitis B vaccination to all age groups can be undertaken in South East Asian countries where Hepatitis B prevalence is Intermediate or high. This can be model for reduction of Hepatitis B burden in these countries.