Tuberculous meningitis (TBM) with hydrocephalus is a serious form of central nervous system (CNS) tuberculosis and is associated with high morbidity and mortality. Here's an overview of the **epidemiology** of **TBM-associated hydrocephalus**:

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🌍 **Global Epidemiology** - **Prevalence**: TBM represents about **1% of all TB cases**, but it accounts for a significant proportion of **neurological TB**, especially in endemic regions. - **Hydrocephalus** occurs in **up to 80% of TBM cases**, particularly in advanced stages. - **High-burden regions**: South and Southeast Asia (e.g., India, Indonesia, Vietnam), Sub-Saharan Africa, and parts of Eastern Europe. - **HIV co-infection** increases the risk of CNS TB, including TBM.

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🧒 **Pediatric vs. Adult Populations** - TBM is more **common in children** than adults. - **Hydrocephalus** is a particularly frequent complication in **pediatric TBM**, occurring in **up to 85%** of cases. - In adults, hydrocephalus occurs in **30–50%** of TBM cases, often as **communicating hydrocephalus**.

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🧠 **Types of Hydrocephalus in TBM** - **Communicating hydrocephalus**: Most common; due to obstruction of CSF absorption in arachnoid granulations. - **Non-communicating hydrocephalus**: Less common; results from blockage of ventricular system (e.g., at the aqueduct of Sylvius).

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🧬 Risk Factors for TBM-Associated Hydrocephalus - **Delayed diagnosis or treatment** - **Advanced stage of TBM** at presentation (MRC Stage II or III) - **Younger age** - **HIV infection** - **Drug-resistant TB**

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⚠️ Outcomes - Hydrocephalus in TBM is associated with:

1. **Poorer neurological outcomes**
2. **Increased mortality**
3. **Higher rates of long-term disability**, especially if not promptly treated

- **Early detection and management** (e.g., medical vs. surgical interventions like VP shunt or ETV) are critical for prognosis.