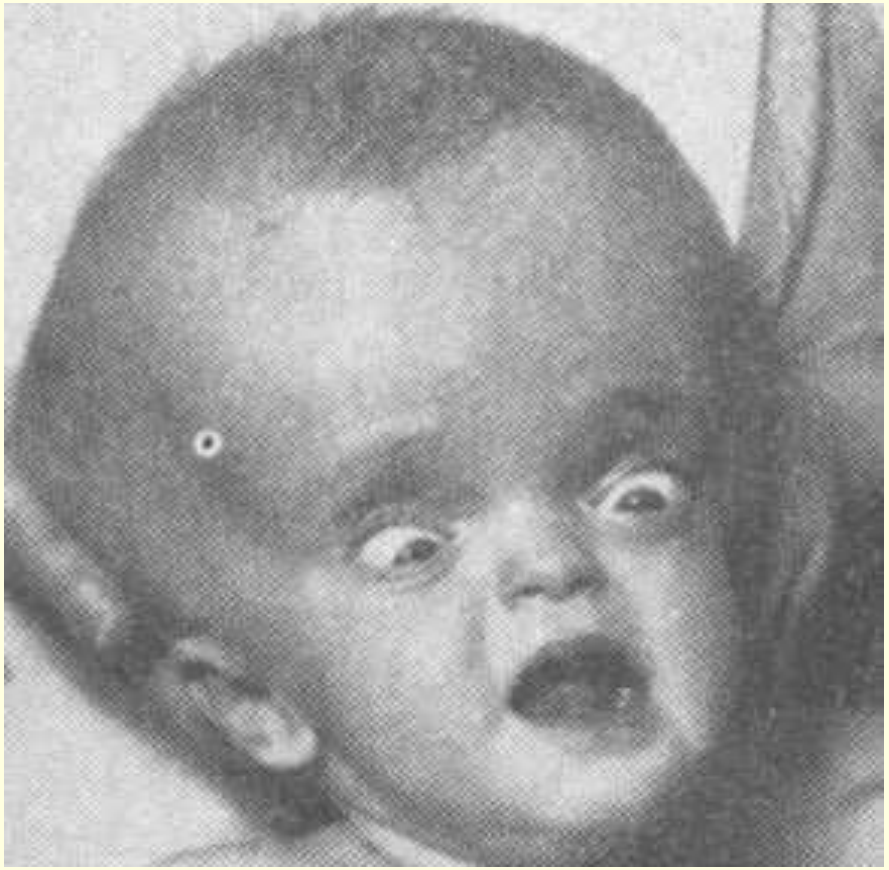
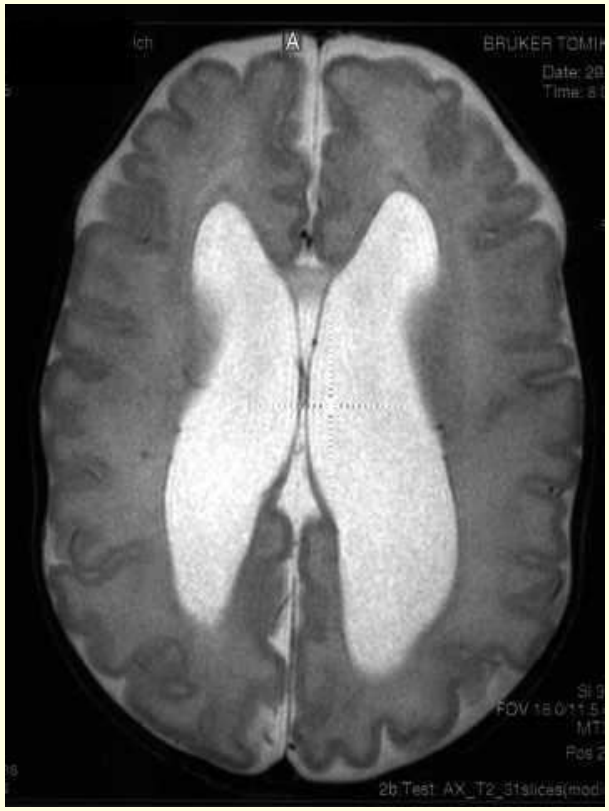
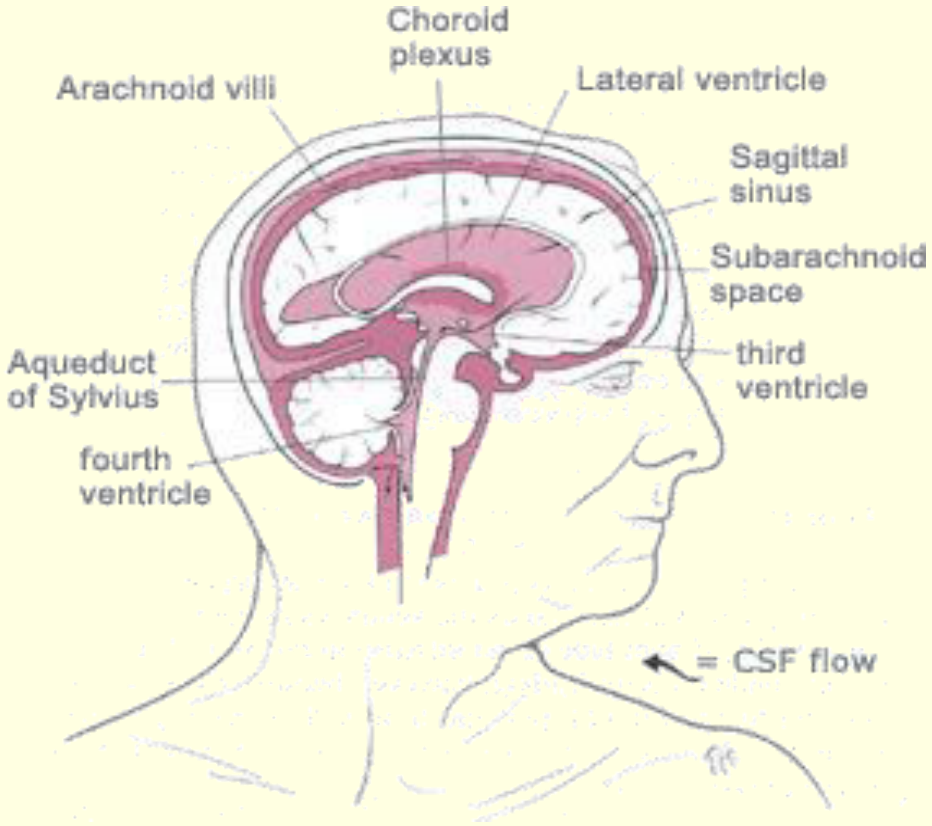
HYDROCEPHALUS



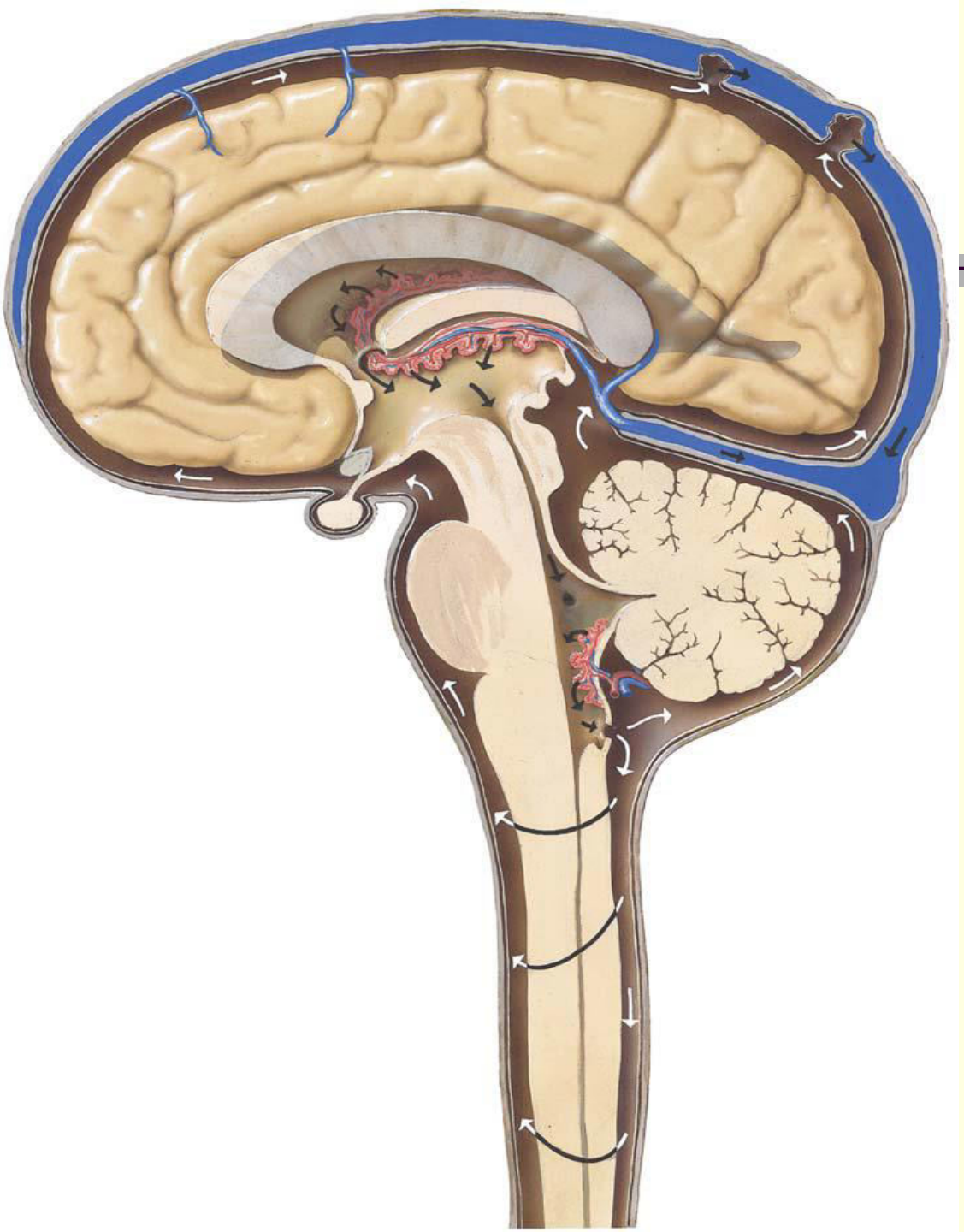
What is hydrocephalus?



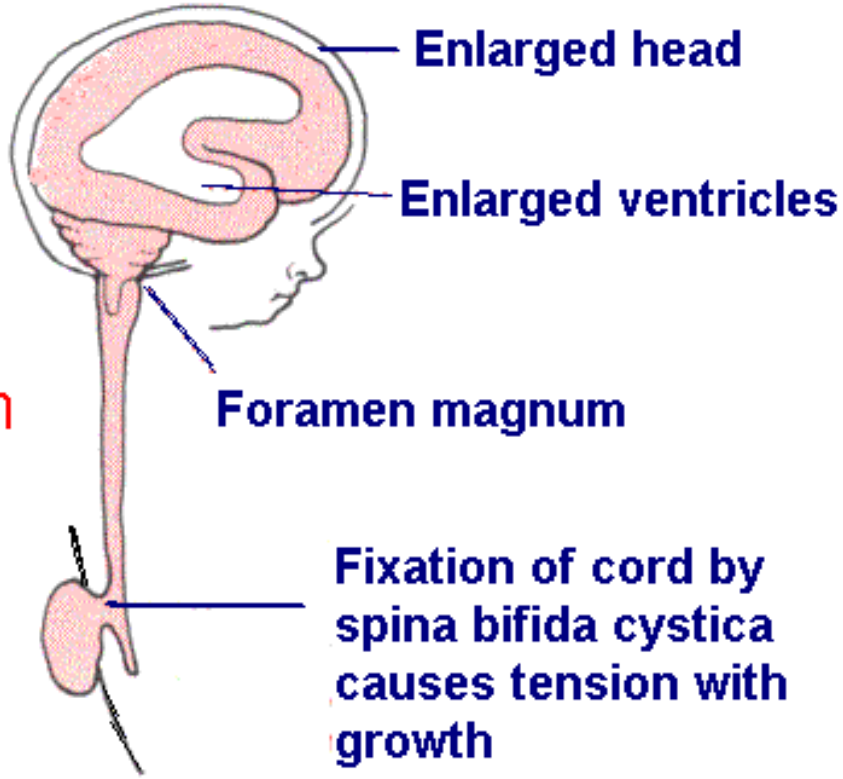
- Commonly known as wate r in the brain
- It is an abnormal accumul ation of cerebrospinal flui d (CSF) within the cavities called ventricles inside the brain.



- Cerebrospinal fluid (CSF)- is a liquid produced by the c horid plexius found with in the ventricles of the brain. I t surrounds the brain and spinal cord, acting as a prote ctive cushion against injury.



HYDROCEPHALY
(HYDROCEPHALUS)



Symptoms

- Baby's head abnormally e nlarges
- soft spot(fontanel) may b e tense & bulging
- scalp may look thin & glist ening
- delayed mental developm ent

Continued Symptoms

- scalp veins may have unus ual fullness
- Feeling baby's head along sutures bones are separat ed
- vomiting
- sleepiness
- irritability
- downward deviation of th e eyes

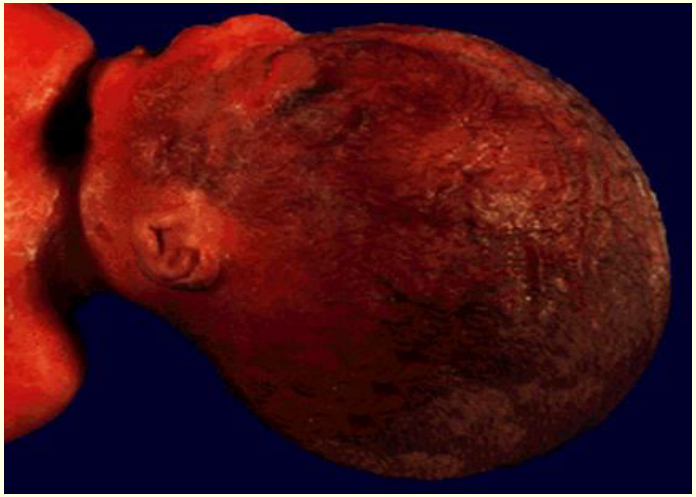
Causes

- Aqueductal obstruction
- Neural Tube Defects or myelomeningocele
- Intraventricular hemorrhage
- Meningitis
- Head trauma
- Tumors
- Arachnoid Cysts
- Dandy Walkers Syndrome

Hydrocephalus may lead to

- mental retardation or brai n damage
- epileptic seizures
- neurological injury
- progressive dementia
- And death

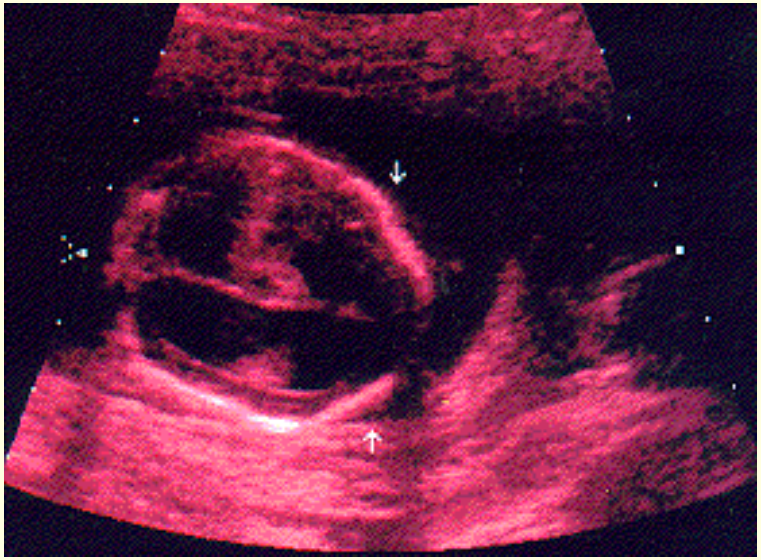
Extreme cases



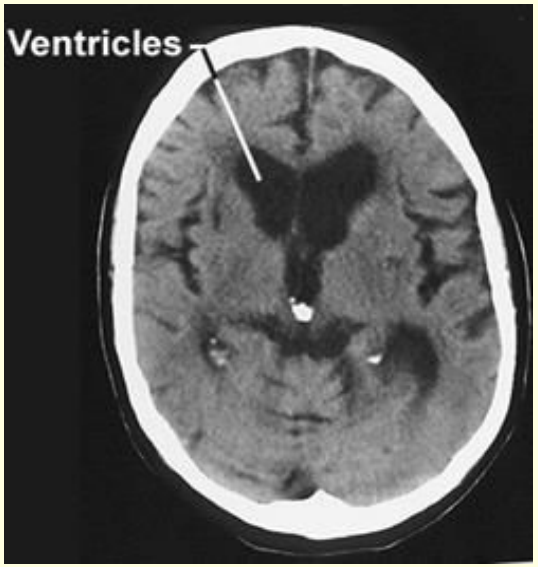
Diagnosing Hydrocephalus

Diagnosing

- Ultrasound

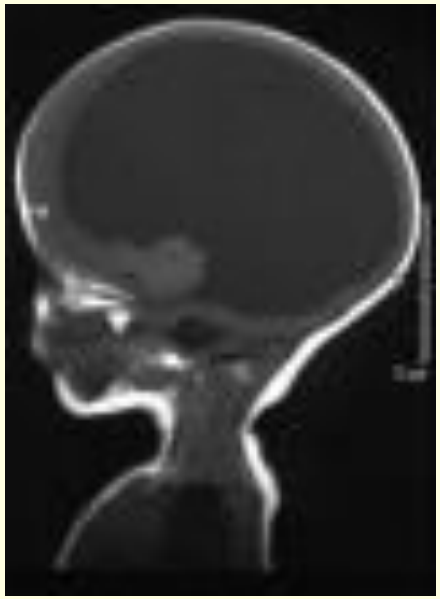


- Computed Tomography (C T Scans)

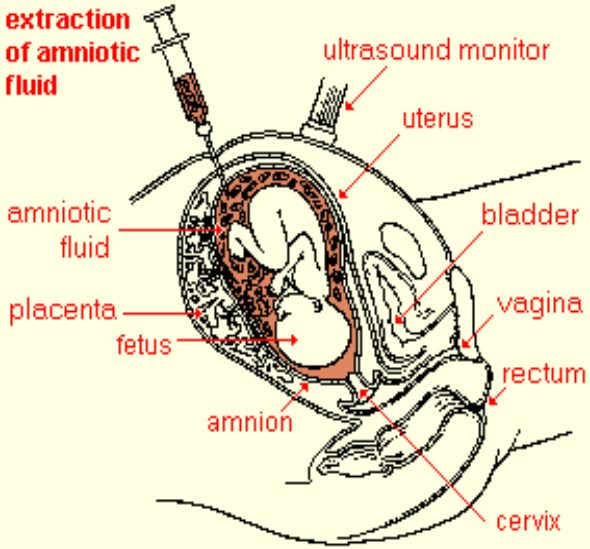


Diagnosing

- Magnetic Resonance Imaging (MRI)



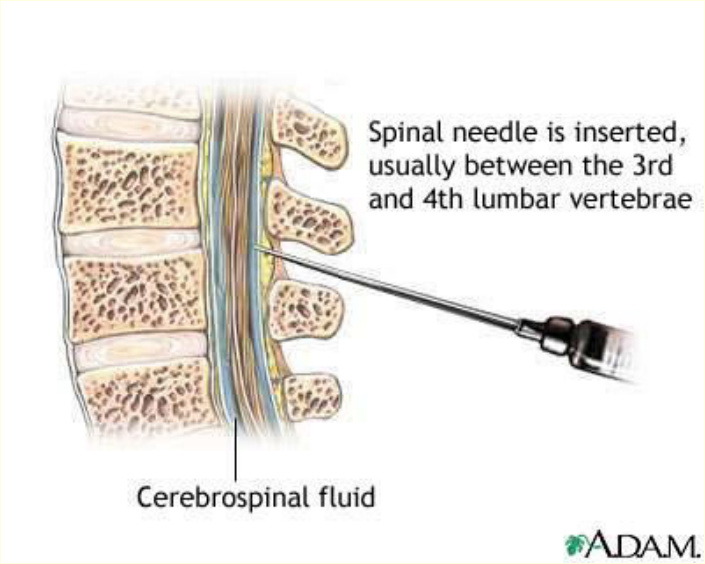
- Amniocentesis



Diagnosing

- Imaging studies/ X-Rays

- Lumbar puncture (spinal tap)



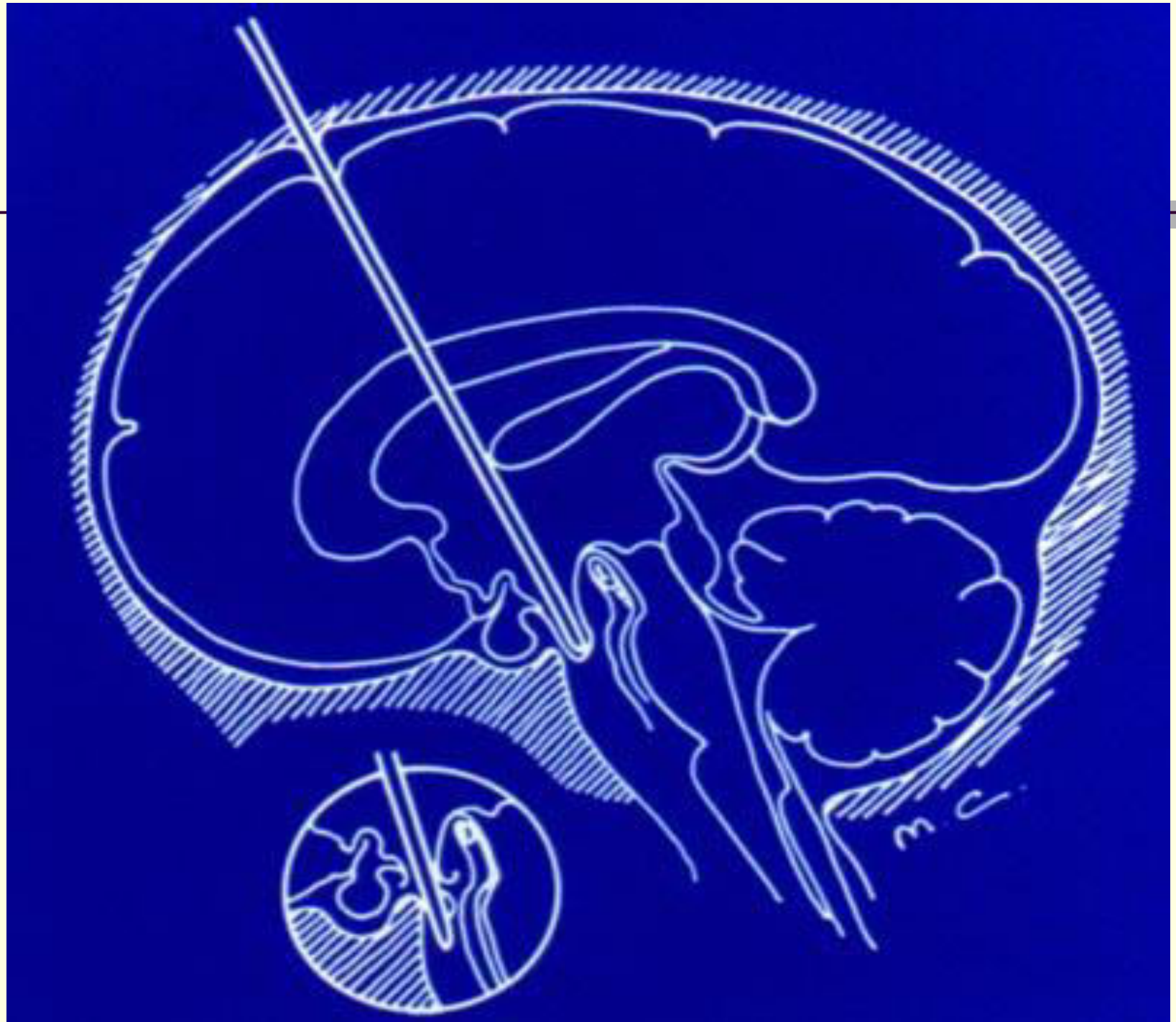
- And Prenatal risk screening (PR P)

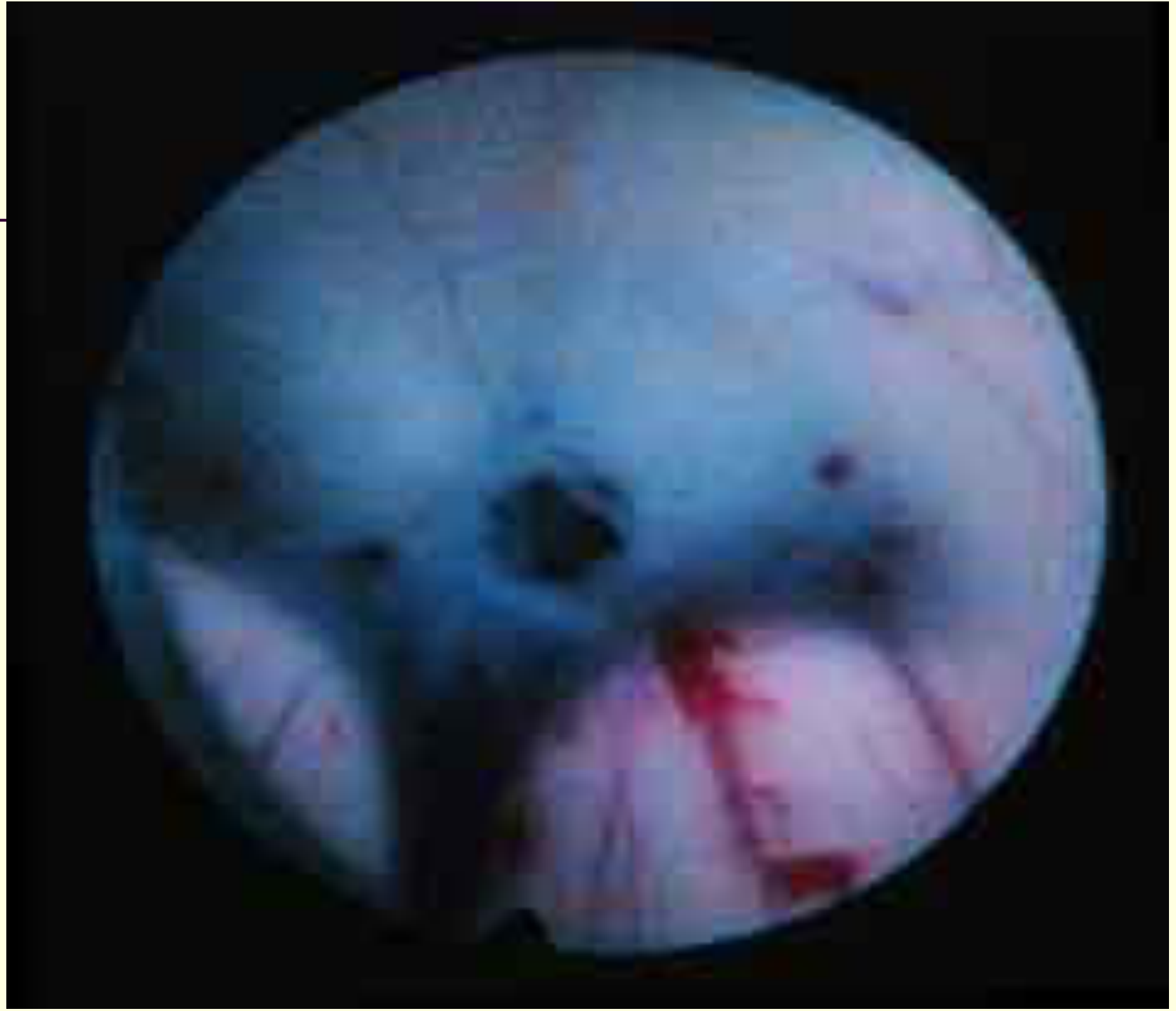
Prevention

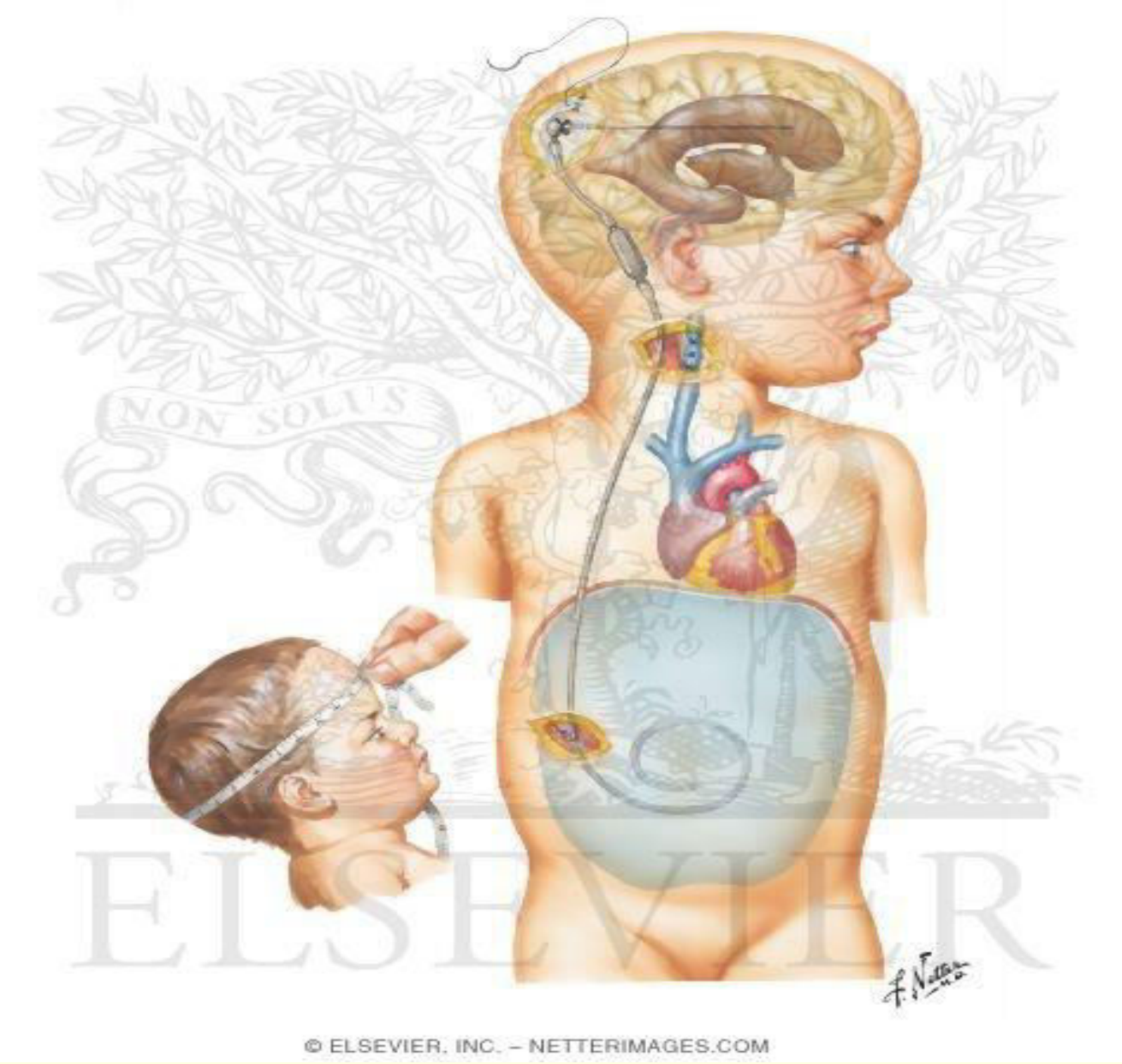
- Prenatal Hydrocephalus is congenital therefore not p reventable, but it can be t reated .
- If left untreated or in extr eme cases may lead to de ath.

Treatment

- Open fetal surgery
- shunt placement
- ventriculostomy
- there are drugs like acetaz olamide, glycerol, furose mide, digoxin& isosobride to postpone surgical place ment of a shunt .



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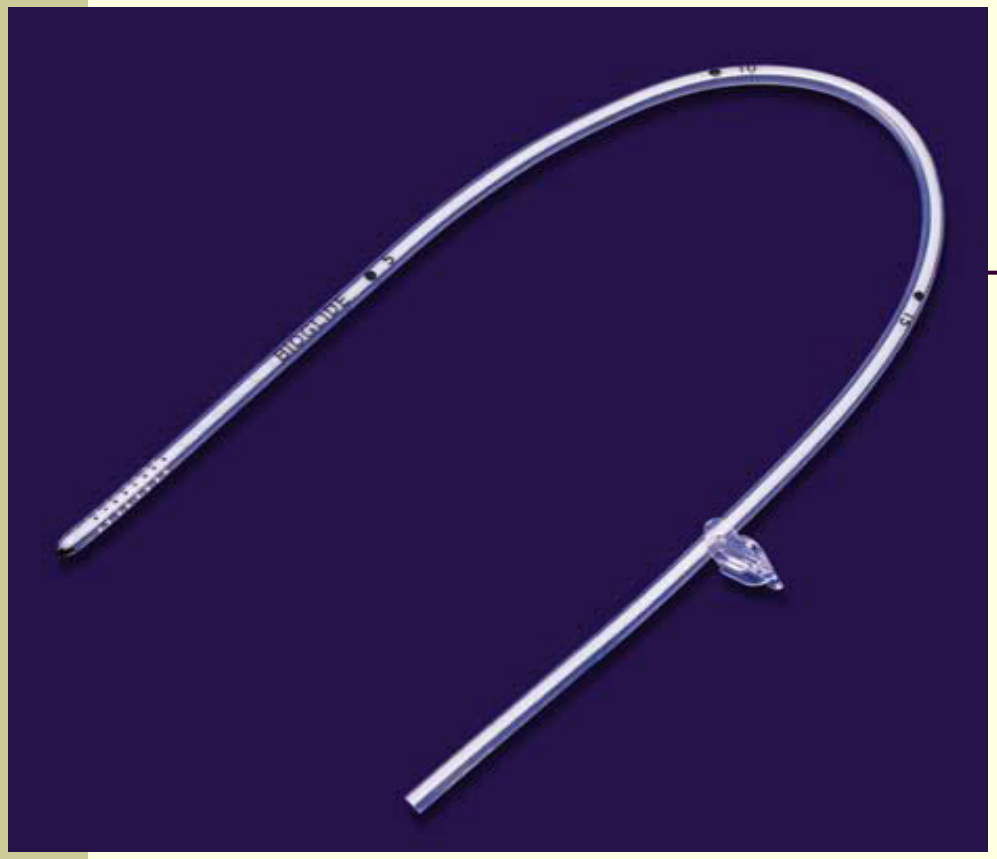
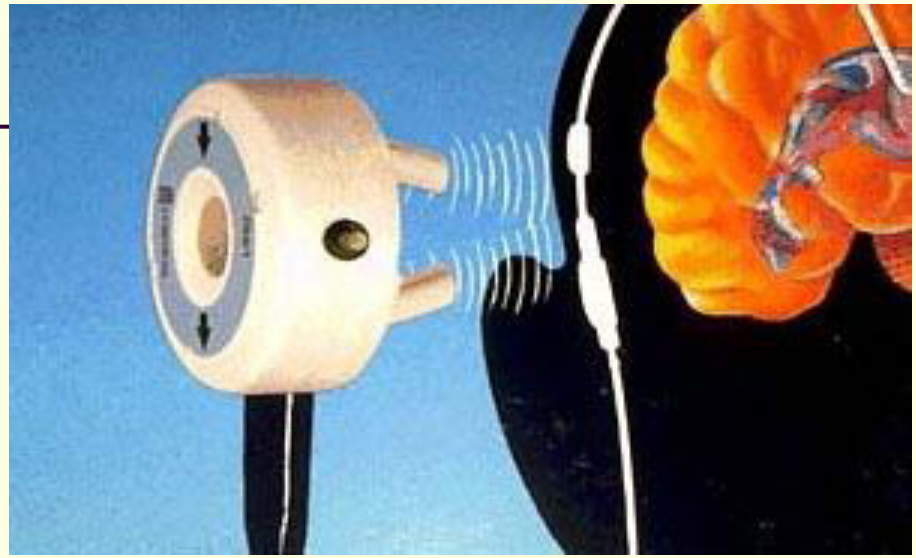
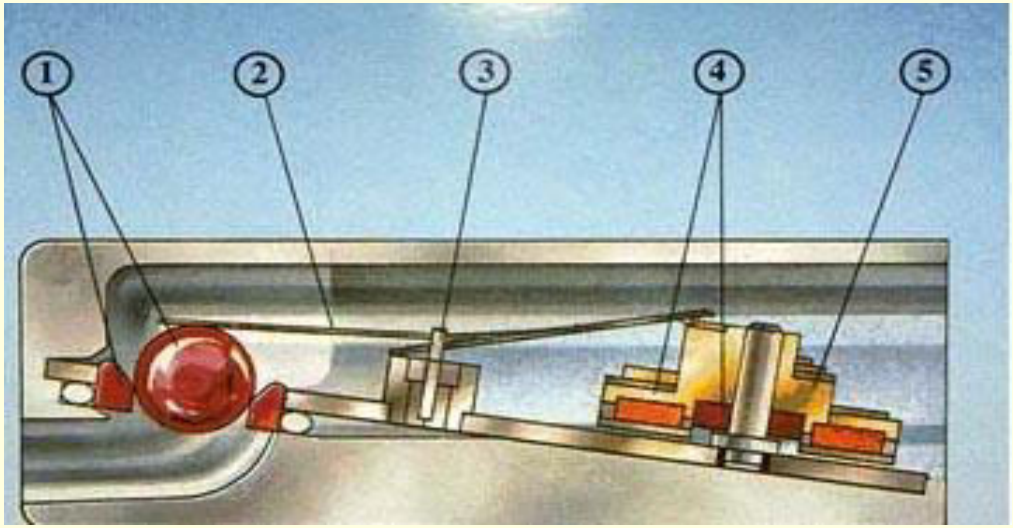
Shunt Placement

- A shunt is a flexible tube about 1/8” in diameter, and is made of soft and pliable plastic usually silastic
- Shunts divert the flow of CSF from the ventricles into the body u sually the abdominal cavity or atrium
- Shunts are placed into the child’s CSF system, and have a cath eter (tubing) and a flow control mechanism (one way valve)
- Most shunts have an access area where testing can be done wit h a fine gauge needle
- One portion of the tube is inserted into the ventricles and is calle d the ventricular catheter
- Then the peritoneal/atrium catheter is inserted into the peritonea l cavity or the atrium
- A valve regulates the pressure of the CSF flow and prevents ba ckward flow of into the ventricles
- There are 6 different types of shunts



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After shunt care

- Regular Follow up visits with the Drs
- shunt site should be cleaned
- eyes examined regularly
- CSF pressure should be chec ked to make sure shunt is w orking
- CSF should be checked perio dically to be sure there Is no infection

Risks of a Shunt

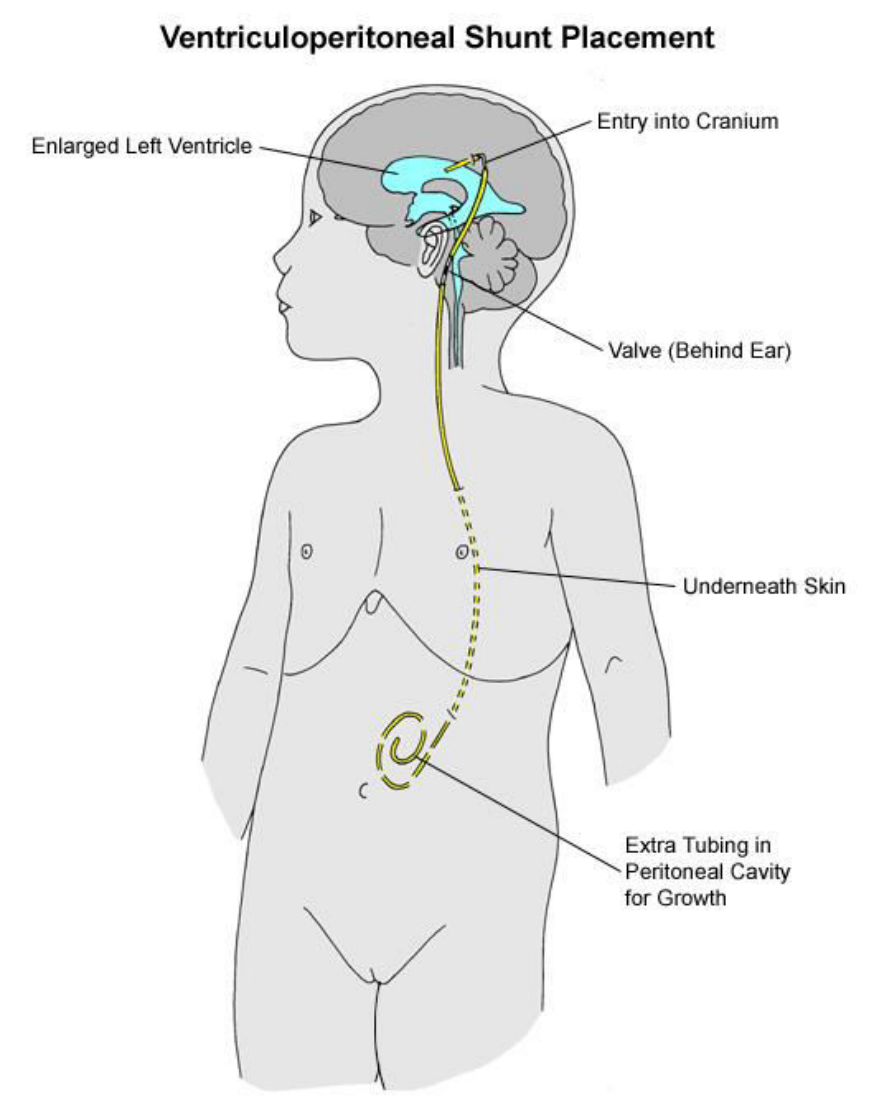
- Possible bleeding under the outermost coveri ng of the brain known as subdural hematoma
- infection (may cause loss of intelligence)
- stroke
- shunt failure/malfunction
- abdominal injury
- over drainage of the ventricles
- death

Shunt malfunction or infection

- Enlargement of head
- fontanel is tense, and upright
- prominent scalp veins
- swelling along shunt tract
- vomiting
- irritability
- Sleepiness
- downward deviation of the eyes
- less interest in feeding
- fever
- redness along the shunt tract

Outcomes of shunt

- Complications occur in ab out 30 % of patients, but o nly 5% are serious or long term.
- 25% to 80% of patients ex perience long term impro vement




In conclusion, congenital and acquir
ed Hydrocephalus is a condition not
a disease, it may not be prevented, bu
t it can be treated. If left untreated it
may cause many disabilities, complic
ations, and even death.