SUMMARY

The nervous system of the newborn infant is extremely immature anatomically. In the premature baby, the brain is even more immature than in the full term newborn. The development of brain is not synchronous, i.e. different parts of the brain grow at different rates and reach their maximum velocities at different times.

The newborn infant develop a number of problems peculiar to the neonatal period.

Intracranial hemorrhage (ICH) in the neonatal period is a well recognized entity of brain affection. It is now the most important neurolagic problem encountered in the newborn. Studies using computerized tomography (CT) estimated the incidence of (ICH) to be from 44 - 50% in premature births weighing less than 1500 gm. There are two classifecations of ICH, clinically into : subdural, primary subarachnoid, intraventricular and intracerebellar hemorrhage, and according to the site. As regards to intraventricular hemorrhag (IVH) there are two classifecations, sonographic into: mild, where small amount of blood in the normal sized lateral ventricle, moderate,

intermediate amount of blood in enlarged lateral ventricle and severe, hemorrhage filling the entire lateral ventricle forming a cast , and into 4 grades based upon the appearance on CT scanning grade 1 : subependymal hemorrhage, grade 2 : IVH without ventricular dilatation, grade 3: IVH with ventricular dilatation and grade 4 : IVH with parenchymal hemorrhage.

ICH in the newborn infants is frequently associated with prematurity , trauma and anoxia and less frequently from hemorrhagic disturbances or congenital vascular anomalies,other causes include hemorrhagic disease of the newborn, Exchange blood transfusion and hypernatremia.

Subdural hemorrhage (SDA) is rarely seen in newborns. It is almost exclusively atraumatic lesion of the full term baby. There are three varieties of SDH, either laceration of tentorium, falx or rupture of the superficial cerebral veins. Seizures accompany SDH is about 50% of such cases.

Primary subarachnoid hemorrhage (SAH); is a common variety of neonatal ICH but usually not of major clinical

importance. SAH refers to hemorrhage within the subarachnoid space that is not secondary to extension from SDH or IVH . It is primarily related to hypoxic insult. It may be generalized or convexity (subarachnoid hematoma).. When seizures accompany SAH, the infant usually appears remarkably well in the interictal period.

Intraventricular hemorrhage (IVH). It is a disorder of liverborn prematures, emanating from subependymal veins in the germinal matrix, often occuring 1 to 3 days after sever hypoxia. Seizures in this context may be part of rapid deterioration that evolves in few hours to coma and respiratory arrest.

Intracerebellar hemorrhage is a relatively frequent type of ICH in samll preterm infants, it is associated with hypoxia and extreme prematurity. The common types of intracerebeller hemorrhage develop either within the cerebellar cortex or occasionally in the subependymal layer of the roof of the fourth ventricle.

The diagnosis of ICH is made mainly with CT scanning which has proved to be an accurate technique in detecting

intracranial abnormalities, real-time ultrasound which has been suggested recently as a reliable noninvasive technique, lumbar pancture and electroencephalography.

The treatment include gental and little handling of the infant, treatment of the cause and sepecific treatment of every type of I.C.H.

Post-hemorrhagic hydrocephalus, is the main sequel of ICH.