**Problem-**

**A new born child is being examined. On the examination of the hips, the right hip fails to abduct fully. When pushed at the Grater trochanter, there is a click and the hip fully abducts.**

This is a straight forward question , there is clear indication to say that this child is having development dysplasia of hip. In this case, hip is dislocated but reducible.

Developmental dysplasia of the hip (DDH) refers to a range of problems of the newborn hip joint that may be shallow, unstable or displaced. It is a common childhood disorder affecting about 20 per 1000 at birth.

Cultural factors (e.g. swaddling of infants, cradle boards (hold the hips in extension and adduction) may account for the high incidence in some groups.

Girls are more likely to be affected than boys; the ratio is about 7:1. This difference is thought to be caused by the increased susceptibility of the female neonate to hormones circulating in the perinatal period, contributing to increased laxity of joints.

The left hip is more commonly affected than the right (3:1), possibly due to the left occiput anterior position of most neonates. About 10% of cases are bilateral

The cause of DDH is multifactorial.

DDH tends to run in families.

The more tightly packaged fetus with reduced intrauterine movement has an increased tendency to develop DDH. First-born children, breech presentation, pregnancies with oligohydramnios or multiple pregnancies carry increased risk.

Other tight packaging abnormalities such as calcaneovalgus feet (25%), metatarsus adductus (10%), torticollis (10%), scoliosis and plagiocephaly are associated with a higher incidence of DDH.

 Various syndromes (e.g Down) and neuromuscular disorders (e.g. arthrogryposis) can lead to hip instability.

**Screening:** hip instability should be checked at birth and six weeks; early diagnosis and treatment of DDH provides the best chance for normal development and function of the hip.

Abnormal examination or associated risk factors require further assessment using ultrasound.

 **Physical examination** should ideally be done on a flat surface with a relaxed child; the nappy must be removed. The Barlow (dislocation/subluxation) and Ortolani (relocation) tests should

be carried out gently to assess the stability or reducibility of each hip.

Other important findings include:

• limited abduction of the hip

• asymmetrical groin creases

• widened perineum

 apparent leg shortening with uneven knee heights (Galeazzi sign).

The affected leg is often externally rotated in infants. Abduction continues to be reduced, and measurement of the affected leg shows that it is shortened, with the trochanter riding high in the

buttock.

***Ultrasound*** is the first-line imagingis It is also useful in monitoring hip development during treatment.

Complications of DDH are avascular necrosis, femoral nerve compression, subluxation dislocation, and instability.

The ideal treatment involves early diagnosis (before secondary hip changes develop). The objectives are to:

• obtain and maintain concentric hip reduction

• allow normal development of the joints

• avoiding complications (particularly avascular necrosis of the

femoral head).

Abduction splintage is indicated. Concentric reduction of the joint must be confirmed by ultrasound and rechecked at regular intervals.

The commonest bracing device used to treat DDH in the younger child is the flexible Pavlik harness, which maintains the hips in flexion and abduction, while restricting extension and adduction.

Regular follow up is necessary.

When persistent dislocation or subluxation persist for > 4 weeks, treatment in Pavlik harness should be discontinued.

If no problem is detected at 3months, 7-9 months- X-ray shows nicely growing femoral head, no problem detected at 2-3 years , reassure mother and advice her to inform VOG in the next pregnancy that she have had child with DDH.