

## Habitual dislocation of the hip: a rare case report

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### Abstract

Habitual dislocation of the hip (HDH) in children is a rare entity and can be a causative factor for popping or snapping hip which is a common problem in children with good prognosis. We report a case of HDH in a 9 year old girl who was suffering from frequent snapping hip at night, its course and treatment process.

**Keywords:** Dislocation, Hip, Child.

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### Introduction

Voluntary habitual dislocation of the hip (HDH) in children is a rare entity (1). Few cases of habitual dislocation of the hip (HDH) as a cause of snapping hip have been reported in the literature (2). Various causative factors have been described for HDH and it has been classified as recurrent, voluntary and habitual dislocations with different prognosis and treatment regarding to its etiology (3). Generally, it has good prognosis and most of the cases which are not associated with congenital or genetic disorder like trisomy can be treated by conservative management (4). We report a case of HDH in a 9 year-old girl who was suffering from frequent snapping hip at night after separation of her parents.

### Case report

A 9 year-old girl has been referred to our clinic because of popping in her right hip for 9 months. Her mother stated that the

popping sound was so frequent and loud that was disturbing to the sleep of the family during the night for the last couple of months. Her mother had a normal pregnancy with vaginal delivery without any problem. According to the records, postnatal physical examination by pediatrician in hospital was normal. She was the first child of the family. There was no record of any congenital or connective tissue disease in the family. Past medical history of the patient was negative for trauma. Educational and school records were in normal range. According to the family history she did not have any problem until 9 months ago. The popping was started after separation of her parents. The patient was used to live with her mother afterward. Although the patient was able to produce popping voluntarily during the day but the chief complaint was the frequent and loud popping sound at night after falling asleep. The popping was painless. In physical examination there was no ligamentous laxity and the hip joints

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Fig.1. Anteroposterior pelvic radiograph

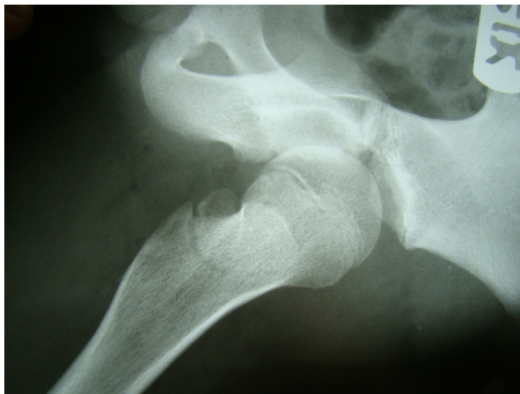


Fig. 2. Lateral right hip radiograph

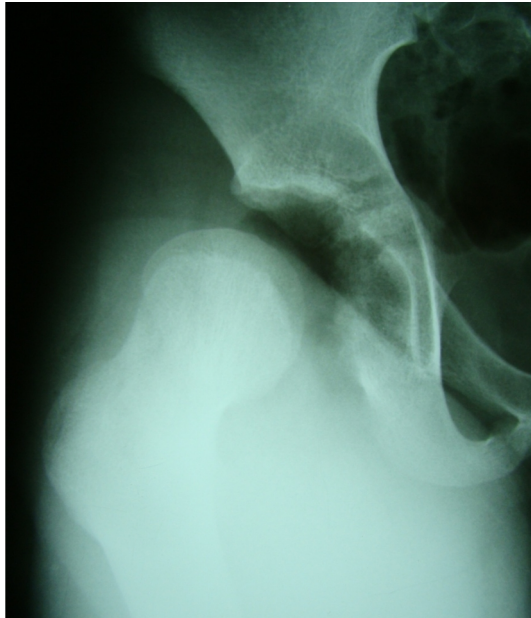


Fig. 3. Right hip radiograph during a dislocation episode which reveals "vacuum phenomenon"

were painless, normal in range of motion and stable in all directions. We asked the patient to produce the popping. She positioned the right hip up to 90 degrees flexion and 15-20 degrees adduction, after doing a

slight internal rotation we heard a sudden loud popping sound and hip was displaced in posterior direction. After dislocation she relocated the hip by external rotation and abduction. The maneuver was painless. Routine lab tests were normal. Pelvic and right hip radiographs were normal (Fig 1, 2). An anteroposterior radiograph after dislocation maneuver revealed hip dislocation with wide space between the femoral head and the acetabulum (Fig 3). We discussed the problem and its nature with parents and referred the family to the psychological consultation. The family took part in sessions of family therapy. After 3 months the popping disappeared and did not recur during 15 months of follow up period.

### Discussion

Snapping or popping hip as described in the literature usually is a benign and common problem. It can be produced by moving of muscles or tendons on bony prominences and synovial fold. This entity can occur by rare condition named as habitual dislocation of the hip (HDH) (4).

Ahmadi et al reported a 9 year-old girl with HDH and to overcome the confusing nomenclature of the literature on this disorder they proposed a simple classification for HDH and related disorders. They classified these disorders in 3 groups: 1- recurrent dislocation (posttraumatic, nonvoluntary); 2- voluntary dislocation (nonhabitual, associated with ligamentous laxity or paralytic disease); 3- habitual dislocation (not associated with significant ligamentous laxity). The management for this disorder will be oriented according to the proposed classification (3).

HDH usually occurs in females. Right hip involves more frequently than left side and the direction of the dislocation more commonly is posterior (5). As mentioned, our patient was female with the right hip involvement and these were in accordance with previously reported cases in the literature.

HDH can be diagnosed by careful history

taking and physical examination. Hip radiology during dislocation can be diagnostic. Sonographic examination has also been used to describe the so called “vacuum phenomenon” which is a characteristic hyperechoic interface between the acetabular fossa and the dislocating femoral head (6). We confirmed the diagnosis in our patient with radiography during a dislocation episode.

Song et al reported 8 cases of HDH, their clinical courses and treatment. Describing their experiences and after reviewing the literature they stated that the treatment should be conservative in the first stage which it can be observing the patient and psychiatric consultation. Surgical procedures to stabilize the hip are indicated after failure of all conservative treatments (2).

HDH has also been reported in Down syndrome. In patients with this syndrome, morphological abnormalities in acetabulum and posterior acetabular wall hypoplasia have been noticed. Imagama et al described a case of a 12-year-old girl with Down syndrome presented with HDH which was accompanied with acetabular wall deficiency. They treated the patient using derotational osteotomy of acetabulum (7). Knight et al reported 9 children with Down syndrome who underwent surgical treatment for habitual dislocation of their hips (8). In this report they recommended femoral varus derotation osteotomy for the treatment of habitual subluxation and dislocation of the pediatric hip in trisomy 21 (8).

Recommendations for treatment of HDH almost always started with conservative treatments (4). In the absence of morphologic and musculoskeletal disorders, conservative treatment and observation with or

without psychological consultation will result in fading the popping and dislocation (9). In our case this kind of treatment also was successful as reported in the literature. We agree with current literature that the prognosis and nature of this entity is good and the treatment in most of cases will be conservative. HDH is a rare entity but is should be considered in differential diagnosis and approaching to a popping and snapping hip.

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