

# Bilateral Fracture of Femoral Neck during Pregnancy: A Case of Spontaneous Healing

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## Article Information

Received date: Feb 13, 2017

Accepted date: Mar 01, 2017

Published date: Mar 03, 2017

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**Keywords** Atraumatic femoral fracture; Pregnancy; Spontaneous healing

## Abstract

Fracture of femoral neck is a serious complication of transient hip osteoporosis during pregnancy. A case of atraumatic bilateral femoral neck fracture was reported. The diagnosis was made two months after delivery. The patient refused surgery. Spontaneous healing was noted firstly on the right hip and secondly on the left.

## Introduction

Transient osteoporosis during pregnancy is an uncommon diagnosis and it occurs typically in the third trimester. The cause of this affection is unknown. The hip is the most common localization followed by knee, foot and ankle [1].

This condition is a risk factor of bone fragility which can lead to a femoral neck fracture.

## Observation

A 41 years old primigravida was admitted in Orthopaedic unit two months after a successful vaginal delivery.

She complained of bilateral hip pain and was limping. The symptoms started when she was at 28 weeks of her pregnancy, with no history of trauma. The physical examination showed an external rotation of the lower extremity without limb discrepancy; she was walking with a pair of crutches.

X-ray showed bilateral fracture of femoral neck [Figure 1].

Laboratory investigations were normal (F.B.C., E.S.R., calcium, phosphorus, total protein, albumin and hydroxyprolinuria).

Surgery was indicated but the patient refused. Spontaneous fracture healing in coxavara was achieved on both hips; the right one 6 months after her first consultation and 8 months for the left one [Figure 2][Figure 3].

Actually, she is pain free and walks normally with normal hips amplitude.



Figure 1: Bilateral femoral neck fracture.



Figure 2: Spontaneous healing in on the right hip.



Figure 3: Bilateral spontaneous healing in coxavara.

## Discussion

Osteoporosis is generally defined as an age-related disorder characterized by decreased bone mass and bone fragility in the absence of other recognizable causes of bone loss [2]. Transient osteoporosis is a self-limited disorder and generally resolves after about one year [3]. The real frequency of transient osteoporosis during pregnancy is under estimated. The first cases on the hip were reported by Curtiss and Kincaid [4]. Most of the time, women present during pregnancy with various painful syndromes, so called lumbago or sciatalgia and are not well investigated. In fact, even the available means to make the diagnosis (X-rays, Scintigraphy) are not authorized during pregnancy. Biology is normal; this is why the diagnosis was made after the delivery. Nowadays, high level of suspicion should indicate the use of Magnetic Resonance Imaging (MRI).

MRI may allow early diagnosis and shows a diffuse bone marrow edema of the femoral head and neck with joint effusion and capsular thickening [5].

The pathogenesis is not well known even though some risk factors were involved [6]:

- Increased weight,
- Micro trauma due to foetal movement,
- Compression of the pelvic sympathetic nerves by gravid uterus,
- Compression of the pudental nerve,
- Compression of the inferior vena cava leading to venus stasis,
- Hypertriglyceridemia.

Femoral neck fracture is an exceptional and serious complication. This complication appears insidiously.

The femoral neck fracture finds its explanation in the weakening of the bones during pregnancy related to osteoporosis and scarce osteopathy [7]; most of the calcium of the mother going to the foetus is also involved [8]. Diagnosis and management delay exposes to avascular necrosis of the femoral head.

Our observation is uncommon:

- The fracture is atraumatic and bilateral,
- The discovery is fortuitous,
- Healing is spontaneous without surgery.

There is no mobility disorder of both hips and limb length discrepancy. This case report seems to be the first one in our knowledge. All other cases were managed surgically: conservative treatment (osteosynthesis) [6-11] or hip arthroplasty [12,13].

## Conclusion

Transient osteoporosis of the hip during pregnancy is a disease that should not be under estimated. The occurrence of femoral neck fracture is the most serious complication. Spontaneous healing makes this case exceptional.

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