



A GENTLE HIP FRACTURE IN A PATIENT WITH RENAL FAILURE: A CASE REPORT

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Article Info	ABSTRACT
<p>Received 22/01/2015 Revised 27/01/2015 Accepted 16/02/2015</p>	<p>Osteoarticular complications are common in patients with chronic renal failure and they often require implantation of a hip arthroplasty (total or partial) due to osteoarthritis, femoral neck fracture or ischemic necrosis of multifactor etiology. Hip fracture is a serious social and health problem even in healthy elderly and more and more problematic in patients with chronic diseases like renal failure. In general, clinicians do not have difficulty in diagnosis of a hip fracture because of significant complaints of the patient taking him or her to the emergency room and clinical findings easily to be observed. In this study we report a significantly displaced hip fracture in a patient with renal failure in which the patient did not have the usual complaints like pain and not to be able to walking so the diagnosis was delayed. She just suffered from weakness in left lower extremity and difficulty in walking lasting for about 3 months. A hip arthroplasty was recommended for the patient but she refused the operation for the high risk due to renal failure. We called the case 'a gentle hip fracture' which we could not find a similar one in the literature.</p>
<p>Key words: Femoral neck, Renal failure, Fracture.</p>	

INTRODUCTION

There are numerous studies regarding osteoporosis treatment due to renal diseases in the literature. In patients with a moderately decreased GFR (Glomerular filtration rate) of 30-60 ml/min, there are very few studies with BMD (Bone mineral density) as endpoint and most drugs seem safe in terms of affecting renal function[16] Bergner et al[2] stated that in patients with renal osteodystrophy and ESRD (End stage renal disease), ibandronate significantly increased BMD and decreased bone turnover. Wang et al[18] studied the salmon calcitonin and found that the dose of salmon calcitonin 50 U three times a week plus calcium carbonate and active vitamin D can effectively preserve the BMD and prevent bone loss in maintenance dialysis patients, and it is well tolerated by patients on maintenance dialysis. Despite these studies, some authors believe that there are very few data about longitudinal changes of bone density in these

patients, and also inadequate studies of whether osteoporosis medications are effective in this population. Therefore, at this time the clinical utility of bone density measurements in patients with end stage chronic kidney disease is uncertain[12]. Pathologic femoral neck fracture due to renal osteodystrophy is reported to be rare[8]. However we know that the overall incidence of hip fracture among patients who had undergone renal dialysis was about fourfold higher than what would be expected in the general population. This increased risk of hip fracture was found among both men and women[1].

A hip fracture without significant clinical findings is not common not only in osteoporotic fractures but also in fractures with the presence of chronic diseases. In this study, we report a significantly displaced hip fracture in a patient with renal failure in which the patient did not have the usual complaints like pain and non weight bearing and



the diagnosis was delayed so we aim to point out the possibility of a hip fracture without usual clinical findings particularly in elderly with chronic renal diseases.

CASE REPORT

A 77-year-old female referred to orthopaedics clinic for weakness in the left lower extremity lasting for about three months. On detailed questioning, the patient described a fall episode 18 months ago which seems to be uneventful initially, but 2-3 months later the patient had started to suffer progressive limping. She had been followed with the diagnosis of renal failure due to diabetic

nephropathy for the last 27 years and she was on hemodialysis for the last three years. On physical examination, the left lower limb was found to be 5.4 cm shorter (anterior superior iliac spine – medial malleolus) than the right side. Hip motions were painless but limited especially during abduction. Motor strength was found to be significantly decreased in ankle dorsal/plantar flexion. Radiograph of the pelvis clearly demonstrated a displaced fracture of the neck of the left femur (Figure 1). The patient was recommended a hip arthroplasty but after consulting to his nephrologists, the patient refused surgery due to its high risk.

Figure 1. Displaced fracture of the neck of the left femur



DISCUSSION AND CONCLUSION

Several investigators have shown that patients with end-stage renal disease (ESRD) have reduced bone mineral density, a risk factor for fracture in the general population[13-17]. Also it is commonly stated that osteoporosis is more frequent in patients on dialysis and kidney transplant recipient than in general population[11]. Also the renal osteodystrophy which is a multifactorial disorder of bone metabolism in chronic kidney disease (CKD). As CKD progresses, ensuing abnormalities in mineral metabolism result in distortions in trabecular microarchitecture, thinning of the cortical shell, and increased cortical porosity[10] so there is no doubt that patients with renal failure and who are under treatment for this entity should be carefully handled not only for other systems' problems but for skeletal system disorders as well. Patients with end stage renal disease generally have reduced bone mineral density and they become prone to femoral neck fractures[9]. Apart from the metabolic bone disease, amyloidosis, hypogonadism, avascular necrosis, and chronic acidosis may contribute to reduced bone mass in these patients[1]. Other risk factors (e.g. Diabetes, immobility, protein wasting and low body mass) also act unfavorably during the follow up of these patients[4].

A hip fracture presents itself with significant clinical findings like pain and with non weight bearing. Hossain et al [7] stated that, although that would not exclude a fracture, patients who were independently mobile before the fall and who do not have pain on axial compression of the limb are less likely to have a fracture. Roberts et al [14] reported a survey of the pain felt preoperatively by 100 elderly patients with an acute fracture of the femoral neck showed that most felt much pain and that a painless fracture was almost impossible. In the literature, only one painless hip fracture was reported by Holmoy et al [6] and this patient had multiple sclerosis.

Actually it is not so possible for an orthopaedic surgeon to see a patient with hip fracture coming to hospital by walking. Can it be possible to explain it by the patient's pain tolerance degree in our case or does long lasting diabetes or ESRD make any effect on pain feeling the answer should be yes but effecting not to decrease but increase the musculoskeletal pain because according to a clinical study of Davison [3] there is growing evidence that dialysis patients have a high burden of symptoms, including pain and musculoskeletal pain was most common (50.5%) and it was stated that DM (Diabetes Mellitus) was associated with higher prevalence of chronic



(MSCs) musculoskeletal complaints, in particular chronic widespread MSCs[5].

Here in, presenting this interesting case, though we do not know the reason why, we can imply that these fractures may also display a silent clinical course without

initial significant morbidity and it can be suggested that patients with chronic renal failure should routinely be controlled for musculoskeletal system disorders or the elderly for hip fractures at least.

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