

# Incidental hip fracture in an outpatient clinic: the importance of patient-centred assessment

Lloyd David Hughes BSc, MBChB, DGM;<sup>1</sup> Gavin Love BMSc (Hons), MBChB, DipSEM, FRCS (Tr & O)<sup>2</sup>

<sup>1</sup> Kelty Medical Practice,  
NHS Fife, Kelty,  
UK

<sup>2</sup> University of Dundee and  
Ninewells Hospital Medical  
School, NHS Tayside,  
Dundee,  
UK

## ABSTRACT

Although many patients presenting with hip fractures have classic symptoms, other patients may present atypically with referred knee pain and reasonably unremarkable clinical examination following initial presentation. Older patients commonly have comorbid conditions such as arthritis, stroke and dementia that can complicate history and examination, making the diagnosis of subtle fractures difficult. Multimorbidity represents an important diagnostic challenge to both primary and secondary care. This case study discusses a 90-year-old lady who was found to have an old right neck of femur fracture after attendance at an geriatric outpatient clinic for a discussion about anticoagulation, after GP referral.

## Case story

Mrs G, a 90-year-old lady, attended the geriatric outpatient clinic after her primary care doctor requested guidance about anticoagulation (recently commenced on apixaban 2.5 mg BD) and aspirin prescriptions for new atrial fibrillation (AF). Her past medical history included AF with new transient ischaemic attacks, type 2 diabetes, mild cognitive impairment, osteoarthritis of knees and ischaemic heart disease. This lady had been residing in a nursing home for 3 weeks for respite care after a couple of falls at home, with the plan to return home with increased social support. These falls had happened 1 and 2 weeks before admission for respite care; no injury was reported after review, although it had affected the patient's confidence considerably.

After initial discussion with Mrs G about risk of stroke and bleeding with treatment, it became clear that the patient was more concerned about her right knee pain. On closer questioning, she reported it had been sore for some time and reported no improvement with paracetamol and low-dose codeine treatment that was trialled by her general practitioner (GP). This lady was distressed and said, 'I cannot get a sleep. Can I have some sleeping tablets as I am so tired'.

The care assistant attending with the patient reported that she had been reviewed twice by GPs and her mobility had declined rapidly over the last 2–3 weeks, with Mrs G now needing to be hoisted in the context of being mobile with a walking aid before admission to respite. There were no documented recent falls in the home. The patient was unable to recall any falls in the home.

Mrs G had become more withdrawn and did not want to eat very much, and the nursing team at the home had requested a further home visit for assessment of her mood. Clinical examination was challenging due to pain, but pain was noted on very limited movement of the knee and virtually no movement of the right hip. X-rays were arranged at the geriatric day hospital that noted an old right neck of femur fracture (Figure 1).

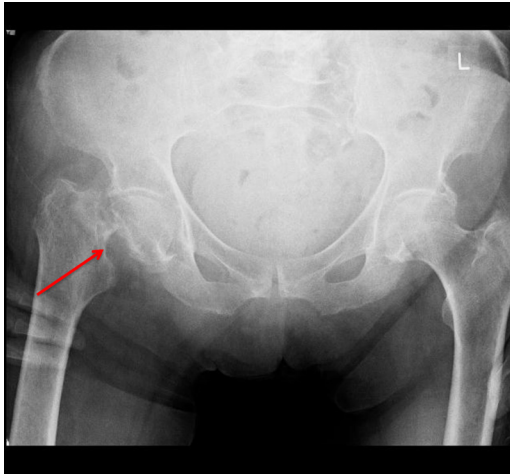
This lady was admitted to the local tertiary hospital where she was fully assessed and worked up by the orthopaedic team. Her case was discussed by the orthopaedic team alongside the orthogeriatric liaison team. Mrs G had a rapid decline in her mobility to such an extent that she was bed-bound, needing to be hoisted, had constant pain, which disturbed her sleep, and she had become socially withdrawn. Treating her non-operatively would

J PRIM HEALTH CARE  
2018;10(2):176–178.  
doi:10.1071/HC17087  
Published online 28 June 2018

## CORRESPONDENCE TO:

**Lloyd Hughes**  
Kelty Medical Practice,  
NHS Fife, Kelty, UK  
L.D.Hughes@dundee.ac.uk

Figure 1. Right neck of femur fracture



have rendered this condition permanent, with associated risks of thrombosis, infection, pressure area breakdown and, ultimately death.<sup>1</sup> It is for this reason that most patients with hip fracture are treated operatively, even in the face of significant co-morbid disease and operative and anaesthetic risks. A recent systematic review and meta-analysis reported that significantly higher 30-day and 1-year mortality was revealed in non-operatively treated hip fracture patients (Odds Ratio [OR] 3.95, 95% confidence interval [CI]: 1.43–10.96; OR: 3.84, 95% CI: 1.57–9.41 respectively).<sup>1</sup>

Following this discussion and communication with family and the patient, the patient had a technically difficult cemented hemiarthroplasty, with transfer to a geriatric in-patient ward for a period of rehabilitation before discharge back to respite care. Her recovery was complicated by a further admission for washout debridement of an infected Thomsons arthroplasty, with further rehabilitation required before transfer back to respite care. Despite washout debridement and a protracted course of intravenous and oral antibiotics, our patient deteriorated, leading to a decision made with the patient and her family to focus on symptomatic care. She died shortly afterwards with her family at her side.

## Discussion

Hip fracture represents the second leading cause of hospital admission for older adults,<sup>2</sup> with incidence rising from 22.5 and 23.9 per 100,000

population at age 50–60 years and 1289.3 per 100,000 population by age 80 years, for men and women respectively.<sup>3,4</sup>

Older patients can present atypically to emergency departments with acute diagnoses,<sup>5</sup> which is particularly relevant to hip fractures, as up to 5% of diagnoses are delayed either because of normal clinical examination and unremarkable radiographs or delayed patient presentation.<sup>6,7</sup> Atypical presentation is particularly pertinent in family medicine, as access to investigations is more limited.

The number of hip fractures that are missed is generally low when x-rays are performed, with an emergency department case series reporting that 1.9% of hip fractures were missed on initial presentation, after reviewing 825 consecutive admissions with hip fracture.<sup>8</sup> The incidence of missed hip fracture diagnosis is closer to 5.3% when patients present to their general practitioner, due to the lack of easily available x-ray facilities<sup>9</sup> and, in this case, likely failure to consider the diagnosis in the absence of classic symptoms. Delay in diagnosis can be catastrophic, resulting in further displacement, technically more difficult procedures and worsening prognosis.<sup>6,7</sup>

More broadly, there is a wide array of challenges when approaching management decisions for older patients. Clinical practice guidelines commonly do not take into account multimorbidity,<sup>10</sup> normal in older patients,<sup>11</sup> with the effect being to drive polypharmacy without providing guidance on how best to prioritise recommendations for individuals in whom treatment burden will sometimes be overwhelming. In this case, the co-prescription of apixaban and aspirin for stroke risk reduction perhaps placed more emphasis upon stroke risk reduction than on side-effect profile – often more relevant for older patients. With these broader issues, there have been considerable efforts to encourage primary care clinicians to consider active polypharmacy reviews, particularly for the oldest old. In Scotland, a polypharmacy guideline was developed by an expert steering group aiming to enable clinicians in primary and secondary care to have patient-focused discussions about appropriate medication

management and alterations as patients move through their life journeys.<sup>12</sup>

## Conclusion

Although many patients presenting with hip fractures have classic symptoms, other patients may present atypically with referred knee pain and reasonably unremarkable clinical examination following initial presentation. Older patients commonly have comorbid conditions such as arthritis, stroke and dementia that can complicate history and examination, making the diagnosis of subtle fractures difficult. Multimorbidity represents an important diagnostic challenge to both primary and secondary care.<sup>13</sup>

In frail older patients with a history of falls or new symptoms of joint pain, fractures should be considered and the possible diagnosis reconsidered if pain has not settled after initial review. In addition, this case reinforces the importance of being comprehensive in the approach to geriatric patients as there can be hidden diagnoses to make apart from the reason for initial referral.

## References

1. van de Ree CLP, De Jongh MAC, Peeters CMM, et al. Hip fractures in elderly people: surgery or no surgery? A systematic review and meta-analysis. *Geriatr Orthop Surg Rehabil*. 2017;8(3):173–80. doi:10.1177/2151458517713821
2. Beaupre LA, Jones CA, Saunders DL, et al. Best practices for elderly hip fracture patients - a systematic overview of the evidence. *J Gen Intern Med*. 2005;20(11):1019–25. doi:10.1111/j.1525-1497.2005.00219.x
3. Maggi S, Kelsey JL, Litvak J, et al. Incidence of hip fractures in the elderly: a cross-national analysis. *Osteoporos Int*. 1991;1:232–41. doi:10.1007/BF03187467
4. Brunner LC, Eshilian-Oates L, Kuo TY. Hip fractures in adults. *Am Fam Physician*. 2003;67:537–42.
5. Limpawattana P, Phungoen P, Mitsungnern T, et al. Atypical presentations of older adults at the emergency department and associated factors. *Arch Gerontol Geriatr*. 2016;62:97–102. doi:10.1016/j.archger.2015.08.016
6. Hofmann A, Wyatt R. Missed subcapital fractures. *Ann Emerg Med*. 1984;13:951–5. doi:10.1016/S0196-0644(84)80673-3
7. Miller D, Meyer C, Perkins C. A barn door: fractured neck of femur. *J Orthoped Surg*. 2005;3:2.
8. Parker MJ. Missed hip fractures. *Arch Emerg Med*. 1992;9(1):23–7. doi:10.1136/emj.9.1.23
9. Eastwood HD. Delayed diagnosis of femoral-neck fractures in the elderly. *Age Ageing*. 1987;16:378–82. doi:10.1093/ageing/16.6.378
10. Hughes LD, McMurdo ME, Guthrie B. Guidelines for people not for diseases: the challenges of applying UK clinical

guidelines to people with multimorbidity. *Age Ageing*. 2013;42(1):62–9. doi:10.1093/ageing/afs100

11. Uijen AA, van de Lisdonk EH. Multimorbidity in primary care: prevalence and trend over the last 20 years. *Eur J Gen Pract*. 2008;14:28–32. doi:10.1080/13814780802436093
12. Scottish Government, NHS Scotland. Polypharmacy Guidance. Edinburgh: Scottish Government; 2015 [cited 2018 March 12]. Available from: <http://www.sehd.scot.nhs.uk/publications/DC20150415polypharmacy.pdf>
13. Mangin D, Heath I, Jamouille M. Beyond diagnosis: rising to the multimorbidity challenge. *BMJ*. 2012;344:e3526. doi:10.1136/bmj.e3526

## ACKNOWLEDGEMENT

The authors thank Dr Neil Gillespie [Consultant Geriatrician] for his encouragement in writing this paper.

## CONSENT

Written informed consent was obtained from the patient for publication of this case report and accompanying images.

## COMPETING INTERESTS

None.

## SPONSOR'S ROLE

Not applicable.