# Is Outpatient Follow-up for Fractured Neck of Femur Necessary?

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**Citation**

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**Abstract**

Introduction: At this centre no protocol existed with regard to outpatient follow up for patients following hospital discharge after treatment for fracture neck of femur (NOF). The aim of this study was to record the incidence of subsequent complications requiring further surgery. We also sought to clarify whether routine outpatient follow-up had a valid role in identifying these patients.

Patients and Methods: We retrospectively reviewed case notes and x-rays of 200 (100 following DHS fixation and 100 following hemiarthroplasty) patients at least a year following hospital discharge after surgery for fracture neck of femur.

Results: 6 (3%) of patients required further surgery. The complications affecting these patients were all identified at a time outside their originally arranged outpatient follow-up schedule.

Conclusions: In our unit we no longer offer routine outpatient follow-up for patients following discharge after fracture neck of femur surgery. Upon discharge we now provide patients with an information leaflet outlining the nature and treatment of their injury. Patients are asked to make a hospital follow-up appointment only if they develop deteriorating hip pain that is problematic.

## PLACE OF WORK

Study took place at the department of Trauma & Orthopaedics, Queen Elizabeth Hospital, Kings Lynn, United Kingdom

## INTRODUCTION

Waiting lists for orthopaedic outpatients are a major concern of the National Health Service. One possible way of reducing waiting times is by reducing the number of unnecessary follow up appointments.

The object of this study was to evaluate the value of follow-up clinic appointments on the subsequent management of patients who had previously been treated for fracture neck of femur.

## MATERIAL AND METHODS

The notes and x-rays of 200 patients who had been previously treated operatively for hip fracture at The Queen Elizabeth Hospital were reviewed. 100 patients who had had DHS fixation and 100 patients who had had hemiarthroplasty surgery were identified. The DHS patients were admitted during the period 1 st January 2003 to 14 th February 2004. The hemiarthroplasty patients were admitted during the period 1 st Jan 2003 to 20 th March 2004. The sequential review of records was commenced in April 2005. Thus the follow-up period after discharge was a minimum of 13 months.

We specifically reviewed:

- The follow-up patterns of different Consultants (6 in our unit).
- The overall rate of significant complications.
- Whether the post-discharge complications were identified as a result of clinic follow-up or secondary re-referral.

## RESULTS

There was no recognisable pattern with regard to the follow-up preferences of any individual Consultant's practices. Overall 69% of DHS and 48% of Hemiarthroplasty patients had follow-up appointments made at the time of hospital discharge.

Significant post discharge complications were identified in 7 DHS patients and 6 hemiarthroplasty patients (table 1).

### Figure 1

Table 1

| Complication | Number of Patients |
|---|---|
| Pain not controlled by oral analgesia ( Radiographically satisfactory appearance) | 3 DHS , 5 Hemiarthroplasty |
| Fracture Non – Union | 1 DHS |
| Screw cut-out | 3 DHS |
| Peri-prosthetic Fracture | 1 Hemiarthroplasty |

The demographics of all patients in the study are summarised in table 2.

### Figure 2

Table 2

| | | |
|---|---|---|
| Number of patients | 100 | 100 |
| Average age | 78 (65 – 91 yrs) | 80 (72 – 95 yrs) |
| Patients given follow-up appointments at the time of hospital discharge | 69 | 48 |
| DNA outpatient appointment | 16/69 (23%)<br>(ie: 53 patients attended) | 13/48 (27%)<br>(ie: 35 patients attended) |
| Patients requiring ambulance transport to attend their appointment | 20/53 (38%) | 16/35 (46%) |
| Complications identified at outpatient follow-up but not requiring surgery (see table 1) | 3 | 4 |
| Complications requiring further surgery (see table 3) | 4 | 2 |
| Mortality within one year<br>(All patients including DNA) | 51 | 53 |

We noted a high rate of non-attendance at the outpatient follow-up clinic; all patients who were deemed to require an appointment were given a clinic appointment card at the time of hospital discharge. If ambulance transport was felt to require again this was arranged on behalf of the patient by the nursing staff at the time of hospital discharge. A high number of patients required ambulance transport to attend their hospital appointment.

In total 6 patients required further surgery (4 in the DHS group and 2 in the hemiarthroplasty group). All of these patients represented at a time outside any pre-arranged follow-up appointment that had been made. Table 3 details patients who required further surgical intervention.

### Figure 3

Table 3

| Patient details | Length of time post-operative when complication identified | Mode of re-presentation | Subsequent procedure |
|---|---|---|---|
| 54 yr Female<br>Left DHS<br>July - 2004 | 3 months. Screw cut out. | Appointment made upon patient request | Conversion to total hip replacement |
| 64 yr male<br>Right DHS<br>March - 2004 | 4 months.<br>Fracture non union. | Appointment made upon patient request | Conversion to total hip replacement |
| 58 yr Female<br>Left DHS<br>Sept - 2003 | 3 Months.<br>Screw cut out. | Appointment made upon patient request | Conversion to total hip replacement |
| 49 yr Female<br>Left DHS<br>Aug - 2003 | 2 Months.<br>Screw cut out. | Accident & Emergency | Conversion to total hip replacement |
| 76 yr Female<br>Right Hemi<br>April - 2004 | 5 months.<br>Peri-prosthetic fracture. | Accident & Emergency | Revision to long stemmed hip replacement. |
| 81 yr Female<br>Left Hemi<br>Oct - 2003 | 2 Months.<br>Severe pain. No outpatient follow up arranged at discharge. | Appointment made upon patient request | Conversion to total hip replacement |

## DISCUSSION

Many patients who require surgery for femoral neck fracture are frail and elderly. A previous study found that levels of functional recovery have optimised at 4 months and that this may be the optimum time for outpatient review ([1]). At that stage mobility often remains significantly restricted; 70% of patients required walking aids and only 42% were living at home ([2]). In our study 41% of patients required ambulance transport to attend their hospital follow up appointment. Mortality following femoral neck fracture is significant, 11-44% at 12 months ([3],[4],[5],[6]), reflecting the frail nature of this group of patients.

It had previously been our impression that a significant number of patients with long-term confusion had difficulty

coping with the busy outpatient clinic environment, many attending unaccompanied from long term care settings. Significant levels of dementia are recognised in patients admitted with femoral neck fractures. A recent study ([7]) found 71/283 (25%) of patients to be affected by 'high grade dementia' at the time of admission with an acute femoral neck fracture.

In our study 6 of 200 patients (3%) admitted for femoral neck fracture required further surgery within one year. All of these patients developed significant pain after discharge (apart from the one patient who required further surgery due to a peri-prosthetic fracture secondary to a fall). 4 out of these 6 patients had had an outpatient follow up appointment made at the time of hospital discharge. However none of the subsequent complications were identified at the time of the originally scheduled outpatient appointment.

## CONCLUSION

Routine outpatient follow-up for fracture neck of femur patients is time consuming and has not been shown to affect future management in a group of 200 patients.

We now no longer routinely follow up these patients. On discharge patients or their carers are given an information leaflet outlining their treatment and advised that they should be re-referred for hospital review by their GP in the event of significant post discharge discomfort.

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