Certification of cause of death in patients dying soon after proximal femoral fracture

All such deaths must be reported to the coroner

EDITOR,—S J Calder and colleagues reviewed the certification of cause of death in patients dying soon after proximal femoral fracture.¹ Their report perpetuates common misconceptions regarding matters relating to death certification and deaths referable to the coroner. It starts with a false premise: that there is any option over reporting a death related to trauma. There is a statutory obligation for all deaths that may be related to trauma to be reported to the coroner, as directed in the *Registration of Births and Deaths Regulations 1987* (regulation 41(1)).² Although, as the authors correctly state, the only person with this statutory obligation is the registrar of births and deaths, doctors should feel obliged to report these deaths, if only to assist the surviving relatives and to fulfil their common law duty.³ The coroner is obliged to hold an inquest into all deaths due to trauma under section 8 of the *Coroners Act 1988*.⁴

When registering the death, relatives may be surprised when, having placed their trust in the doctor that all is in order with the certificate, they are informed that the death must be reported to the coroner. The practice of deceiving the registrar by knowingly omitting the fracture from the certificate purely to avoid the possibility of having to attend an inquest is to be strongly condemned. This practice is due to doctors' unnecessary fear of the function, purpose, and procedure of an inquest.

There is no time limit for referring these deaths to the coroner. The 28 day rule of thumb described in the paper and claimed to be used by junior staff has no legal justification. Also, the suggestion that the inquest is a mere formality in addition to the necropsy is untrue.

The legal facility to mention femoral fractures related to age on the death certificate without this rendering an inquest mandatory, as the authors request, already exists, as the mention of the fracture on the certificate does not mean that an inquest is necessarily held. If the fracture is due to osteoporosis it is often regarded, in the appropriate circumstances, as a natural cause of death. A necropsy is usually required to assess the degree of osteoporosis and thus confirm the natural cause of death. A fall may result from an osteoporotic fracture rather than the other way around. The death must, however, be reported to the coroner. When there is a possibility that trauma played a part in a death it is for the coroner to determine whether the death was due to trauma or natural causes.

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1 Calder SJ, Anderson GH, Gregg PJ. Certification of cause of death in patients dying soon after proximal femoral fracture. *BMJ* 1996;312:1515. (15 June.)

2 *Registration of Births Deaths and Marriages Regulations 1987*.

London: HMSO, 1987:regulation 41(1).

3 *R v Clerk* (1702) 1 Salk 377.

4 *Coroners Act 1988*. London: HMSO, 1988:section 8.

Mortality inferred from death certificates reflects coroners' practice, not the true mortality

EDITOR,—S J Calder and colleagues' conclusion that death certificates do not reflect the true mortality from hip fracture¹ is supported by data from Peterborough. Of the 303 patients with hip fracture who were admitted to Peterborough District Hospital during 1995, 17 died within 28 days, of whom 15 died in hospital. Current practice is to discuss all these cases with the coroner. The coroner allowed the death certificate to be issued in 14 cases because other medical conditions were thought to be more pertinent as a cause of death. For the other deaths in hospital a coroner's postmortem examination was requested; this showed death from natural causes in each case, and the coroner issued the death certificate. No inquests were held.

In all of the cases in Peterborough the hip fracture was mentioned in section 2 of the death certificate. Our results can therefore be compared with those of Calder and colleagues. Such a comparison shows that the lower 28 day mortality from hip fracture in Peterborough was not reflected by a correspondingly lower mortality calculated from the death certificates: in Calder and colleagues' study the 28 day mortality was 94/1274 (7.4%) and the mortality calculated from death certificates 23/1274 (1.8%); in Peterborough the figures were 17/303 (5.6%) and 15/303 (5.0%), respectively.

Coroners throughout Britain have different policies, with some holding inquests into most deaths after hip fracture. This practice results in considerable distress to relatives and additional costs. The mortality from hip fracture as inferred from death certificates therefore reflects the practice of different coroners and not the true mortality from this condition. Most deaths due to a hip fracture, even when the fracture was due to a fall, are deaths due to natural causes. I believe that a change is needed in the law relating to deaths from causes in which external violence is not a factor. If such a change occurred it would enable doctors to be more accurate in completing death certificates by entering hip fracture either as the primary cause of death or as a contributory factor.

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1 Calder SJ, Anderson GH, Gregg PJ. Certification of cause of death in patients dying soon after proximal femoral fractures. *BMJ* 1996;312:1515. (15 June.)

Postmortem examination should always be carried out for deaths due to trauma

EDITOR,—S J Calder and colleagues' study of the certification of the cause of death in patients who die soon after proximal femoral fracture revisits a phenomenon that has been recognised for many years.¹ Death certificates and pathologists' reports to coroners are often written in ways deliberately designed to avoid an inquest,^{2,3} and

this practice leads to underreporting of certain lesions in official mortality statistics. Such lesions include proximal femoral fracture.^{1,3}

The desire to avoid an inquest when death occurs after a simple femoral fracture is understandable, and we believe that the solution is simple. Most of these deaths occur in elderly people with osteoporosis after relatively minor trauma that would not lead to fracture in the average healthy adult. It is therefore legitimate to categorise such fractures as pathological fractures and thus as natural causes of death. The death certificate could, for example, state:

1a: Bronchopneumonia (or pulmonary embolism or whatever)

1b: Immobilisation after fracture of the neck of the right femur

1c: Osteoporosis.

Some clinicians will feel uncomfortable that deaths occurring after trauma should not be investigated, and we therefore recommend that clinicians should report all these cases to the coroner and that a postmortem examination should always be carried out. This procedure would identify a small minority of cases requiring further investigation, which would possibly lead to an inquest. This would have the additional advantage of correctly identifying the complication leading to death, for many clinical diagnoses are not confirmed at postmortem examination, even in Leicester, where Calder and colleagues carried out their study.⁴

Unfortunately, the above suggestion does not necessarily overcome another problem identified by Calder and colleagues, which is that current practices lead to an underestimation of proximal femoral fracture in official mortality statistics. The arcane rules of the Office for National Statistics would lead to the death in our hypothetical example being recorded as due to osteoporosis.⁵ The solution to this problem lies with the Office for National Statistics, which could disseminate data derived from analyses of multiple conditions in addition to those from the analyses of single conditions that currently appear in its annual reports.

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1 Calder SJ, Anderson GH, Gregg PJ. Certification of cause of death in patients dying soon after proximal femoral fracture. *BMJ* 1996;312:1515. (15 June.)

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3 Pemberton J. Are hip fractures underestimated as a cause of death? The influence of coroners and pathologists on the death rate. *Community Med* 1988;10:117-23.

4 Kendall IG, Wynn SM, Quinton DM. A study of patients from A&E for coroners post mortem. *Arch Emerg Med* 1993;10:86-90.

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Authors' reply

EDITOR,—G N Rutty and colleagues raise several points we would like to answer. How long after a hip fracture does death stop being related to that fracture? Our combined experience of well over 2000 prospectively documented hip fractures has convinced us that most deaths within four