

Surgical Repair of Hip Fractures in the Elderly: a Safe Journey or a Rush to Disaster? The Case for Prior Medical Stabilization

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In July 2004 the Israel Ministry of Health published directives on how to proceed with the management of elderly patients with femoral neck fractures if they are unable to give informed consent as a consequence of medical or mental problems, if a legal guardian is unavailable, or if the need to appoint a legal guardian will take more than 48 hours [21]. According to these directives, if the surgical procedure must be carried out within 48 hours of admission, it has to be authorized by three doctors, as in any case in which there is an immediate danger to life or the threat of severe and permanent disability. However, in many instances, surgery is precluded because of uncontrolled medical problems that require prior patient stabilization, sometimes requiring days. In these cases, a conflict may arise between orthopedic surgeons and other treating physicians, because the former may follow the guidelines strictly while anesthesiologists and internists are more likely to favor stabilization through medical treatment even at the price of delayed surgery.

A crucial question in the controversy over the timing of surgical repair of femoral neck fracture is the necessity of surgery. Parker and Cols [22] reviewed five randomized trials involving 428 elderly patients and concluded that the limited available evidence from randomized trials does not suggest any major difference in outcome between conservative and operative management for extracapsular femoral fractures. However, surgical repair does appear to be associated with a reduced length of hospital stay and improved rehabilitation. These conclusions are derived mainly from one study. Conservative treatment, which is acceptable when modern surgical facilities are unavailable, is associated with fewer complications than surgery, but rehabilitation is likely to be slower and limb deformity more common. Therefore, the authors recommend that further prospective randomized trials with a large population should be conducted to resolve this issue.

In cases where surgery is imperative for femoral neck fracture in elderly patients, does fast tracking them from the emergency department to the operating room reduce mortality or morbidity? Clague et al. [23] showed that a shorter time was associated with increased mortality. Already in the 1980s some authors believed that delaying surgery for 24 hours or more was associated with decreased mortality, most likely because the patient's condition could be stabilized over this period, leading to optimal preoperative medical conditions [24,25]. Zuckerman [19] contended that

the association of operative delay with mortality over the first postoperative year can be explained, at least in part, by the severity of the preexisting medical conditions, as assessed by the anesthesiologist prior to surgery.

Weller et al. [26] conducted a retrospective study of 57,315 hip fracture patients who were treated in teaching and non-teaching hospitals in Ontario, Canada. They found that patients in teaching hospitals, who have a longer delay before surgery on the average, have a lower 1 year mortality rate. Similarly, Ho et al. [27] assessed the determinants of postoperative length of stay and inpatient mortality in the United States (California and Massachusetts) and Canada (Manitoba and Quebec) among 37,290 patients and found no association between wait-time and mortality.

Grimes et al. [28] provided additional evidence that delay of surgery does not affect mortality. They conducted a study of 8383 patients from 20 hospitals in four metropolitan areas and found that time to surgery did not influence short or long-term mortality. They concluded that it might not be critical to rush hip fracture patients with active medical problems to surgery and recommended prior optimization of the patient's medical condition. Their conclusions and recommendations are consistent with other reports that surgery can be safely delayed for a few days, until medical problems are brought under control [29,30].

In conclusion, the directives of the Israel Ministry of Health seem reasonable for patients who do not have chronic comorbidity or an active severe, medical condition. However, at present, there is little empiric evidence to support recommendations that surgical repair of hip fractures should be carried out within 24 hours of admission to avoid increased postoperative mortality. We totally agree with Williams and Jester [31], who stated that it would be unethical to promote treatment that is not supported by strong evidence and could have an adverse impact on postoperative mortality.

We trust that we have provided some food for thought for medical policy makers. We support the formulation of guidelines in which patients are classified into groups that better distinguish between those who may benefit from surgery within 24 hours of admission and those who may benefit from a delay of surgery until their medical condition is stabilized. We hope that such guidelines will be published in the near future.