Early Death Following Primary Total Hip Arthroplasty

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Background: Total hip arthroplasty (THA) is widely accepted as an efficacious and cost effective treatment for debilitating arthritis of the hip. Despite its universal acceptance in terms of safety, mortality remains a recognized risk following THA with death rates in the region of 1-2% at 90 days post operation [1-3] and 15-33% at 6-10 years following THA [3-5].

Aim: We aim to describe the timing and cause of death, and so ascertain the excess surgical mortality associated with primary total hip arthroplasty.

Material and Methods: The timing and cause of death in a population of patients undergoing primary total hip arthroplasty in a single unit were compared with those in a population of patients awaiting the same procedure. Mortality rates were calculated at cut-offs of 30 and 90 days post operation or following addition to the waiting list. Cause of death was recorded as that listed on the death certificate.

Results: Total hip arthroplasty was associated with an excess surgical mortality of 0.256% at 30 days (p=0.002) and 0.025% at 90 days post operation (p=0.892) when compared to a population of patients awaiting the same procedure. Neither age nor gender influenced the risk of death though the incidence of death was more common in patients over 75. The day to day 90-day mortality for all age groups is shown in figure 1. Myocardial infarction and pneumonia was the cause of death in the majority of cases.

Conclusion and Clinical Implications: By using a more appropriate control population, primary total hip arthroplasty is seen to be associated with an excess surgical mortality at 30 days post operation, an effect that diminishes at 90 days post operation. Patients should be counselled accurately about the magnitude of this risk and efforts to decrease mortality should concentrate on the early post-operative period.

Figure 1

References:


