

# Rehabilitation therapy reduces mortality after total hip replacements

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In *International Orthopaedics*, Liu et al. [1] showed mortality rates of primary hip arthroplasty from 0.32 % in 1990 to 0.29 % in 2004 in the United States. In the *Lancet*, Hunt et al. [2] found that the 90-day mortality after total hip replacements fell substantially from 0.56 % in 2003 to 0.29 % in 2011 for England and Wales. Although they propose improvements of general health, surgical technique and anaesthesia for this finding, Liu et al. and Hunt et al. miss advances in rehabilitation therapy as a likely factor.

At present, advances in rehabilitation therapies have received more attention, which could be used to reduce complications and mortality after total hip replacements [3]. Many studies [4, 5] also suggest an enhanced rehabilitation protocol after hip arthroplasty not only reduces morbidity, but also helps in reduction of economic burden by reducing length of stay. Rehabilitation programs are performed either in a medical care institution or at home.

In fact, rehabilitation strategies have both direct and indirect effects on mortality after hip arthroplasty. A direct effect is thromboprophylaxis. Rehabilitation strategies (e.g., intermittent pneumatic compression and foot pump exercise) are usually used for thromboprophylaxis [6], and thromboprophylaxis could independently reduce mortality.

Moreover, improved pain control and functional status, reduced stress response and prevention of other complications are the indirect effects, which help improve patient function and outcome and thus may influence mortality after hip arthroplasty [3].

We think that decreases in mortality after hip arthroplasty may be attributed to improvements in general health, surgical technique, anaesthesia, and rehabilitation therapy. And we hope medical staff, health-care decision makers and patients pay attention to rehabilitation therapy after total hip replacements.

We declare that we have no conflicts of interest.

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