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Editorial
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The Long-Term View-Assessing Life Expectancy Post-Knee Arthroplasty: A Commentary on "Life Expectancy of Patients Undergoing Total Knee Arthroplasty: Comparison With General Population"

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Fortune-telling may reside in the realm of superstition, but data-driven prediction anchors itself firmly within the domain of science. A prime example of this scientific approach is the life table, which marked the initiation of using statistics for forecasting future events.[1] Currently, life tables are critical in establishing national healthcare policies as well as treatment protocol of each patient.

Life tables afford detailed predictions about mortality based on factors like age and sex. When predicting the life expectancy of patients with specific disease conditions, a disease-specific life table is mandatory.[2] This tailored life table significantly enhances the precision and applicability of decision-making processes and policy development.

Total joint arthroplasty (TJA) stands out as a surgical intervention that significantly improves the quality of life for patients suffering from end-stage arthritis.[3] Total knee arthroplasties (TKAs) are globally practiced to reduce pain and functional disability of knee osteoarthritis patients.[4,5]

However, as the average lifespan extends, some patients outlive the TKA and might necessitate revision surgery in the future.[6]

Globalization has not mitigated the distinct differences in lifestyle, genetic backgrounds, and health care system across the world. Despite the importance of region-specific life expectancy data after TKA, there was a lack in research within South Korea and across Asia.

The study of Kim et al.[7] investigated the 15-year survival rate of 601 patients who underwent TKA at a single institution between 2005 and 2011. The study showed that the age-standardized mortality ratio (SMR) of the cohort was lower than that of the general population, especially in the age group of 70 years and older. The cause-specific SMRs for circulatory disease, neoplasm,

and digestive disease were also lower than those of the general population. Circulatory disease and neoplasm are the first to third leading causes of death in Koreans.[8]

This study and previous studies have reported that TKA has a cardioprotective effect by increasing the functional capacity of patients and reducing the use of drugs, such as nonsteroidal anti-inflammatory drugs (NSAIDs).[9,10] In addition, reducing drug use can also help reduce digestive disease. The study also suggests that preoperative screening and regular follow-up after surgery can reduce cancer mortality.

More than 30% of patients, who have knee osteoarthritis, undergo TKA during their life, and deep understanding of post-operative life of these patients is crucial.[11] Through this study, we can provide information that TKA can reduce long-term mortality as well as improve pain in patients over 70 years of age. However, in the younger age group of 50s to 60s, this effect is less pronounced, and further research is needed in this younger group.

This knowledge is beneficial for pre-operative counseling, post-operative care, and establishment of healthcare policies. It is imperative to disinter tailored relevant data to predict postoperative life of TJA patients.

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