Access to hip and knee replacement surgery for patients with chronic diseases in the English NHS

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Background:
The English National Health Service (NHS) is funded through general taxation and care is free at the point of use. Hip and knee replacement is one of the most common and effective surgeries. Previous research has reported inequality in access to hip and knee replacement surgery according to socioeconomic status, sex, ethnicity and geography, but less attention has been given to the impact of co-existing chronic diseases.
Methods:
We analysed data reported by 640,832 patients who had surgery between 2009 and 2016 in the English NHS. Multivariable linear and logistic regression was used to estimate impact of 11 different chronic diseases on symptom severity as measured by the Oxford Hip (OHS) and Knee (OKS) score, ranging from 0 (worst) to 48 (best outcome) and the likelihood of having long-standing joint problems (>5 years) at the time of surgery.

Results:
Average age was 68 years and 85% were from a white ethnic background. The most common chronic diseases were high blood pressure (53%), heart disease (18%) and diabetes (12%). In both hip and knee patients, all 11 chronic diseases were significantly associated with worse pre-operative severity of symptoms (adjusted differences ranged from -1.1 to -2.5 for the OHS and -0.5 to -2.6 for the OKS). In hip patients, 6 out of 11 chronic diseases (adjusted OR ranged from 1.04 (95% CI 1.01, 1.07) for lung disease to 1.17 (95% CI 1.07, 1.29) for stroke) were significantly associated with having more long-standing problems. In knee patients, 2 out of 11 chronic diseases (OR was 1.06 (95% CI 1.04, 1.08) for heart disease and 1.06 (95% CI 1.04, 1.09) for diabetes) were significantly associated with having more long-standing problems.

Conclusions:
Hip patients with chronic diseases tend to have more severe symptoms and have surgery later in their course of their joint disease. In knee patients, there is less evidence on the impact of chronic diseases on waiting time and the impact on symptoms is less severe.

Key messages:
- Patients with chronic diseases reported more severe symptoms at the time of their joint replacement surgery.
- Patients with chronic diseases may be having surgery later in the course of their joint disease.