

Radiological method identifies hip patients who may need to be re-operated

October 21 2015

Between 5 and 30 per cent of those who receive a new hip prosthesis will require a re-operation during their lifetime. New research shows that a high-resolution X-ray method can predict which patients have the greatest risk of re-operation.

In Sweden, around 16,000 hip prosthesis operations are done annually, and about an additional 1,100 re-operations are done where part or all of the prosthetic must be replaced or removed.

Varies with age

The risk of re-operation varies with the patient's age: around 30 per cent of [patients](#) under 50 undergo a re-operation within 15 years, while the corresponding percentage for patients older than 75 is 5-10 per cent.

The risk of re-operations also increases after each new operation on the [hip joint](#).

Special method

Over 30 years, researchers at Sahlgrenska Academy at the University of Gothenburg have developed a special examination method that makes it possible to measure the prosthesis movement relative to the bone using high-resolution X-rays (called radiostereometry). The method, which has now been evaluated in a [doctoral thesis](#), can be used to predict which

patients are at risk of re-operation.

"With the radiostereometric method, we can discover movements in the artificial joint socket. Since these movements increase the risk that the [prosthesis](#) will loosen on the long term, the information can be used to predict re-operation," says Maziar Mohaddes, who is presenting the studies in his doctoral thesis.

Improves the outcome

According to the researchers, the radiostereometric [method](#) can predict at an early stage if new prosthetic models and surgical techniques are safe, and if they can be expected to improve the outcome in patients.

The technique in question is so specialised that it is primarily used in research.

According to Maziar Mohaddes, broader clinical use could both identify and to some extent reduce the scope of complications in [hip](#) operations.

More information: Link to thesis: gupea.ub.gu.se/handle/2077/39540

Provided by University of Gothenburg

Citation: Radiological method identifies hip patients who may need to be re-operated (2015, October 21) retrieved 7 May 2024 from <https://medicalxpress.com/news/2015-10-radiological-method-hip-patients-re-operated.html>

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