

Indications, Contraindications, Side Effects and General Notes Regarding Total Hip Replacement (THR) Operation

A. Indications

- The hip joint is worn and torn due to the natural aging process, trauma or rheumatic diseases.
- Fracture or ischemic necrosis
- Postoperative procedure of previous operation, e.g.: joint reconstruction (osteotomy), arthrodesis, segmental or total hip replacement (THR).

B. Contraindications

- Acute/chronic local or systemic infection
- Severe diseases of muscles, nerves or blood vessels that could endanger limbs.
- Periarticular bone stock deficiency, making it difficult or impossible for implantation
- poor muscle or ligament tissues conditions
- Joint disease which may require alternative reconstruction (osteotomy)
- Patients under 60 years of age
- Any disease that might result from the operation and affect the function and success of implants.
- Allergy to implants, particularly to metals (e.g.: cobalt, chromium, nickel, etc.)
- Renal dysfunction. Although the relationship between serum cobalt and chromium level is not yet well determined, the influence of increased serum level of cobalt and chromium on patients' health should still be considered. In the case of renal dysfunction, metal accessories like Metasul is not advised or should be used only under close monitoring (cobalt and chromium serum level, serum creatinine, BUN, echocardiography) so as to avoid the increase of the cobalt and chromium contents in serum. It should only be used after careful evaluation and where the operation benefits are greater than risks.
- Local bone tumor or bone cyst
- Preganancy

C. Risk factors

Risk factors are crucial for the success of the operation.

- Misgivings regarding allergic reactions to implanted materials.
- Overweight and obesity (particularly with individuals weighing more than 225 lb (100kg))
- Small skeleton.
- Osteoporosis or osteomalacia
- Bone deformity, congenital dislocation of the hip, severe defection of axial location of the knee joint area.
- Impaired immunity (HIV tumor, infections)
- Poor nutrition, drug abuse, smoking, alcohol abuse, and medication.
- Strenuous and speedy exercises that put acute stress on the implants (e.g.: heavy labor, athletics, marathon running, downhill skiing, jumping and group exercises)
- Inability to understand and follow the doctor's instructions.

D. Related health insurance regulations

- The application of hip prosthesis for reconstruction (including total hip prosthesis or isolated femur or hip cup liner replacement), and bipolar hip prosthesis requires advance permission. This is dependent upon preoperative X-ray films.

- Internal fixation is considered the principle treatment for femoral neck fracture. Bipolar prosthesis could be considered for treating a patient above 60 years old with displaced femoral neck fracture. For patients above 80 years of age, hip joint replacement with Moore's Prosthesis is the principle. Exceptional instances require approval from BNHI before surgery. The rationale along with Karnofsky scale report and X-ray films should be included for application.

E. Information other than the indications, contraindications and risk factors

- An implantation operation is only considered when all alternative treatments have been carefully evaluated and considered inappropriate.
- Every piece of implant will wear and age. The stably installed components may loosen or gradually lose their functions. A reoperation might be considered for loosened or worn implants.
- In most cases, the infection around the implants needs to be removed. Signs and contraindications for the use of a prosthesis can be absolute or relative. The decision to have this operation requires careful evaluation, examination of the patient's overall conditions, and consideration of all alternative treatments such as non-operative management and arthrodesis.
- The decision to operate mainly depends on the patient's age, overall physical condition, current skeletal condition, the operations that have been done before and the operations possibly needed following THR. This operation is typically performed on a patient with full-grown skeleton.

F. Possible side effects

Risks derived from having an artificial joint include suffering an allergic reaction and experiencing loosened, worn, torn, corroded, partially or totally dislocated, aged, broken artificial joint, and the need for modification or reoperation.

- The function of the implanted artificial joint may be affected by factors including: breakage, loosening, over-wearing, excessive force, damage, inappropriate installation and treatment.
- The implants may loosen because the strength transmission is changed, the cement base is worn, torn and damaged, and/or because body tissues react to the implants.
- Early or late infection.
- Dislocation, subluxation, limited movement, and unexpected lengthening or shortening of the affected leg could occur if the implants are not properly installed.
- Fractures may occur when too much stress is put on one side or when the bone quality weakens.
- Wound hematomas or delayed wound healing.
- Cardiovascular diseases, including thromboembolism, pulmonary embolism and heart failure.
- Limited movements.
- Blood circulation deficiencies, including damaged vessels (iliac artery, obturator artery, femoral artery), thromboembolism pulmonary embolism, and myocardial infection.
- Temporary or perpetual diseases of femoral nerves, sciatic nerve, peroneal nerve, and obturator nerve.
- Aggravation due to operation trauma, leg length discrepancy, weakening femur or muscle.
- Corrosion and wear of implanted materials, and tissue reaction and allergy caused by cement particles.

- Urinary complications, particularly retention of urine, and urinary tract infection.
- Aseptic loosening.
- Other complications involved in the operation, medication, other devices used, blood, and anesthetic.
- Ectopic ossification.
- Pain.

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