

Aseptic lymphocytic-vasculitis-associated lesion (ALVAL) due to metal hypersensitivity after Metal-on Metal total hip arthroplasty

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Introduction: Metal-on Metal bearing surface have been reintroduced for use during total hip replacement due to lower wear, use of large head and better range of motion. The mechanism of adverse reaction of the metal debris to the soft tissue is still not clear. But, recently, unexplained pain, early failure, and the formation of pseudotumors have been recorded. The cause of these reactions is not well understood but could be due to excessive wear or metal hypersensitivity or an as-yet unknown cause. The tissue features may help distinguish reactions to high wear from those with suspected metal hypersensitivity.

Material and Methods: We retrospective review our cases on metal-on metal total hip replacement from 2009 to 2011. Tissue samples from revision total hip replacement for metal-on-metal total hip replacement was examined. The histology feature of the tissue from around the hip replacement was examined.

Results: Tissue sample obtained from hips with metal-on metal implants displayed a pattern of well-demarcated tissue layers. A prominent feature was a pattern of perivascular infiltration of lymphocyte that is different from the specimen from metal-on-polyethylene.

Delay type-IV hypersensitivity test is highly suspect.

Conclusions: Unexplained groin pain, early failure and pseudotumor formation after metal-on-metal hip replacement should suspect the possibility of metal hypersensitivity. CT or MRI could help to early detection of pseudotumor formation. Differential diagnosis with infection should be done carefully. Lymphocyte transformation test and histological features help to identify metal hypersensitivity.

人工髖關節術後股骨骨折的臨床經驗

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The management of periprosthetic femoral fractures: Clinical result of our institution

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Introduction: Over the past few decades, periprosthetic femoral fractures after hip arthroplasty have been recognized as an increasing problem affecting large numbers of elderly population. A variety of techniques are available, and the optimal surgical methods still remain controversy in the literature. The purpose of this study was to retrospectively review postoperative periprosthetic femur fracture of in the past 8 years treated in our hospital and compared the clinical result in different methods.

Materials and Methods: There were 46 patients who suffered from periprosthetic femur fracture after hip replacement arthroplasty received consecutive follow-up during Jan 2003 and Nov. 2011. We had evaluated the patient through medical record including the operation time, the hospitalization day, the clinical outcome and the radiography.

There are 10 patients categorized as Vancouver type A, 29 patients as type B, and 7 patients as type C. Type A were treated with cable wire or hook plate. The type B were treated with Dall-Mile plate system, stem revision surgery, or cable wire fixation. The patients of type C were treated with Dall-Mile plate system or plates.

Results: The failure rate of Dall-Mile plate in type B1 was 6% (1 out of 15 cases) and 0% in type C. However, the stem subsidence rate in Dall-Mile plate in Vancouver type B1 was 40% (6 cases out of 15 patients), however, none of the case loosening for revision surgery. In the cases with linear fracture in Vancouver type B1, ORIF with cable wire showed excellent prognosis, with only one case showed stem mild subsidence. In the cases of B2, bypass long stem with or without cable wire showed 80% survival rate. In the cases of Vancouver type C, Dall-Mile plates was sufficient for fixation (Union rate: 100%).

Discussion: As the literature mentioned before, cable plate system seems to be reliable in Vancouver type B1 and C of periprosthetic fracture. For Vancouver Type B2, B3, bypass long stem with cable wire or allograft is more reliable. Periprosthetic femoral fractures are challenging to treat; recognizing the fracture pattern, bone stock around prosthesis, stability of prosthesis, choice adequate implant would ensure the clinical result.