Experience of knee and hip replacement in patients with haemophilia

Zorenko V, Polyanskaya T, Karpov E, Sadykova N, Sampiev M, Mishin G,Vasiliev D, Golobokov A

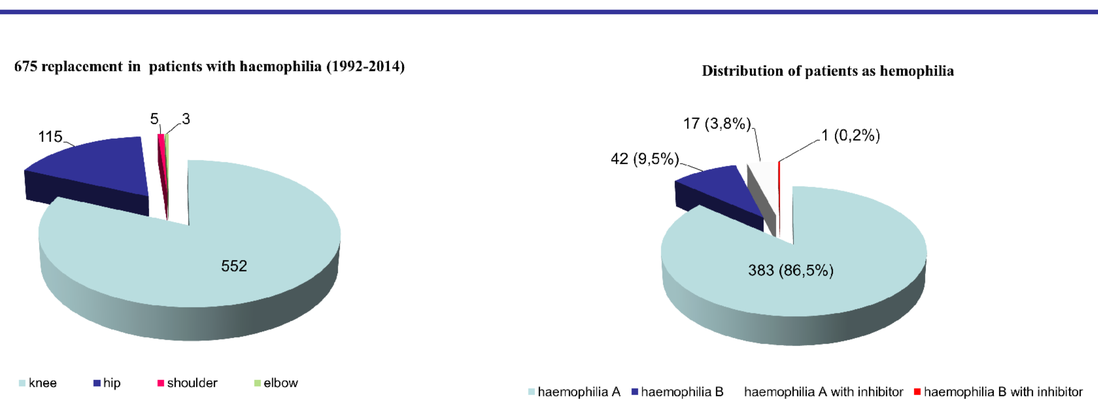
National Research Center for Hematology, Moscow, Russian Federation

OBJECTIVES

Haemophilic arthropathy is a major problem that affects patients with haemophilia. Haemarthroses at the target joint cause structural damage that involves synovium, cartilage and bone leading to chronic arthropathy (1,2,3,4,5). End-stage arthropathy of the joints is painful, disabling and strongly impairs the quality of life (6,7). The safe and effective clotting factors concentrates reduce the incidence of arthropathy. Total joint replacement is a safe treatment patients with end-stage haemophilic arthropathy. Most of these patients were born before the advent of regular replacement therapy (8). Reports with long-term follow-up are limited. We present our clinical experience of 675 knee, hip, shoulder and elbow replacement in patients with haemophilia between 1992 and 2014.

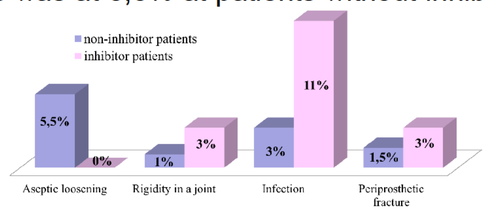
METHODS

There were 552 knee, 115 hip, 5 shoulder and 3 elbow replacement, 23 knee and 3 hip replacement of them were at patients with inhibitor haemophilia. 383 patients had haemophilia A, 42 had haemophilia B and 17 patients had inhibitor haemophilia. 90% of patients had positive antibodies to hepatitis C (anti-HCV+), 3 patients were with HIV infection. 64 patients were underwent multi-stage replacement: 3 of them have 4 joints replacement, 20 patients have 3 and 41 patients have 2 joints replacement. 26 patients had joint replacement with special model endoprotesis. Factor VIII (FVIII) or IX (FIX) replacement therapy was administered to non-inhibitor patients by boluses infusion, targeting factor during surgery and in the postoperative period until wound healing. Patients with inhibitors were treated with activated recombinant factor VII (rFVIIa) by boluses or with anti-inhibitor coagulant complex. No antithrombotic prophylaxis was used.



RESULTS

In all cases during operation achieved good haemostasis, except for one patient with hemophilia B and massive blood loss. In all cases during operation of replacement patients were carried out sinovektomy or arthrolis of the target joints. Average blood loss during operation was about 1168 ml. Blood loss at patients with inhibitor was more, than at patients without inhibitor. At 3% of patients without inhibitor replacement were complicated by deep infections and 11% at patients with inhibitors haemophilia. Aseptic loosening of the components was at 5,5% at patients without inhibitor and 0% at patients with inhibitors.



CONCLUSIONS

Joint operations in patients with haemophilia are complex procedures. Anatomy and bone quality can be affected by severity of disease, increasing the technical difficulty of operations (9,10). In our research blood loss and infection of prosthesis was more common compared with the general population. It should be noted that inhibitor increases risk of blood loss during operation and infection of prosthesis.

Overall, our results confirm that replacement is a safe and effective procedure in haemophiliacs with end-stage arthropathy. It must be performed by a surgeon with lengthy experience. Joint replacement surgery in haemophilia is very valuable in relieving pain and increases the quality of life.

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