

Reference: World Journal of Clinical Cases-80650

Title: Short-term Outcome of Total Knee Replacement in a Patient with Hemophilia: A Case Report

Dear editor,

Thanks very much for taking your time to review this manuscript. We would like to express our sincere appreciation for your careful reading and invaluable comments to improve this paper. We have addressed all issues raised by the reviewers. Based on the instructions provided in your letter, we uploaded the file of the revised manuscript. Appended to this letter is our point-by-point response to the comments raised by the reviews.

We would like also to thank you for allowing us to resubmit a revised copy of the manuscript. We hope that the revised manuscript is accepted for publication in the World Journal of Clinical Cases.

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Sincerely,

Yin DL and Zeng MD

02/03/2023

**Responses to Reviewers' comments one by one:**

**Reviewer #1:**

Scientific Quality: Grade C (Good)

Language Quality: Grade A (Priority publishing)

Conclusion: Minor revision

Specific Comments to Authors: This is a case report of a patient who suffered from hemophilic arthritis of the left knee joint with nonunions of distal femoral and proximal tibial fractures for many years and was resolved with a single operation. It is considered a rare case where the problem was dealt with in a very serious condition. I think it deserves to be reported as a breakthrough surgical treatment in the final stages of hemophilic arthritis. Now, as a hematologist, I would like to make the following comments based on my own experience. This patient unfortunately had terminal arthritis. How was this patient hematologically followed from childhood until he developed a femoral fracture in 2013? Medical hemostasis management, such as regular replacement therapy, along with orthopedic treatment, such as physical therapy and timely synovectomy, are the best treatments to prevent end-stage arthritis. It was unclear how the

hematological approach was taken as a background to the progression of arthritis from the onset of hemophilia to the state before this surgery, so please add it. I think that revision surgery will be necessary after an average of 10 to 15 years of artificial joint replacement, but is this surgery fundamentally different? Regarding the above two points, I would like to request your guidance and reconsideration.

1) This patient unfortunately had terminal arthritis. How was this patient hematologically followed from childhood until he developed a femoral fracture in 2013? Medical hemostasis management, such as regular replacement therapy, along with orthopedic treatment, such as physical therapy and timely synovectomy, are the best treatments to prevent end-stage arthritis. It was unclear how the hematological approach was taken as a background to the progression of arthritis from the onset of hemophilia to the state before this surgery

Answer:

Thank you very much for your comments, it is a very professional issues in hemophilia. The Factor VIII which come from the blood was infused intermittently to this patient when him was found with Hemophilia. And also due to the economic reasons and the lack of Factor VIII in our country, the medical hemostasis management was not standardized. The same reason for the patient who did not timely synovectomy. It is a pity for him.

And we have make appropriate additions of this information to the history of present illness.

2) I think that revision surgery will be necessary after an average of 10 to 15 years of artificial joint replacement, but is this surgery fundamentally different?

Answer:

Thank you very much for your comments. The time required for normal TKR revision surgery is about 15-20 years, or even longer because of the advances in technology and development in materials and design.

And this patient procedure with a “custom-made modular hinged knee prosthesis equipped”. Perhaps the revision time for these prostheses is close to that of tumor prostheses. And recent oncological review reported the 5-, 10-, 15-, 20- and 25-year survival of prostheses to be 78%, 70%, 61%, 38% and 36%, respectively. [Haijie, L. et al. *Implant Survival and Complication Profiles of Endoprostheses for Treating Tumor Around the Knee in Adults: A*

Before the operation, we fully communicated with the patient, informing him of the possible survival period of the prosthesis and related matters related to revision.

**Reviewer #2:**

Scientific Quality: Grade C (Good)

Language Quality: Grade B (Minor language polishing)

Conclusion: Minor revision

Specific Comments to Authors: Dear authors: First of all I would like to congratulate you on the research carried out. The presentation of the case is complete and it is a rather rare case. What is not clear to me is the initial state of the subject and that he had a ROM of 0 degrees prior to the intervention. I have seen the video after the operation and recovery of the subject, but you do not have images and/or video of the initial state of the operated joint? Complementary images that can provide more information? We need something that provides information of the subject before and after the information. I understand that x-rays could also shed some light on the case. - I have also noticed how some abbreviations are used sometimes yes and sometimes no, please check. - Also, you should talk about the incidence and prevalence in your country, worldwide... . They should introduce a rehabilitation and/or physiotherapy programme that the patient has carried out to check the treatment received, providing details of the techniques used: quadriceps strengthening, passive and active mobilisations, strengthening by means of loads or eccentric contractions... it is essential to understand the patient's recovery and the ROM of the knee that has been operated on. Best regards.

1) . What is not clear to me is the initial state of the subject and that he had a ROM of 0 degrees prior to the intervention. I have seen the video after the operation and recovery of the subject, but you do not have images and/or video of the initial state of the operated joint? Complementary images that can provide more information? We need something that provides information of the subject before and after the information. I understand that x-rays could also shed some light on the case.

Answer:

Thank you very much for your comments. The knee ROM of the left thigh prior to the intervention is 0 degrees, because of the knee joint bony fusion. From the X-ray in figure 1C and D, figure 2A and B we can find the bony ankylosis.

It is a pity we don't have pre-operative video.

2) I have also noticed how some abbreviations are used sometimes yes and sometimes no, please check.

Answer:

We apologize for the confusion generated by the manuscript in abbreviations. We have corrected the issue and will send the revision manuscript to the language editing company.

3) you should talk about the incidence and prevalence in your country, worldwide... . They should introduce a rehabilitation and/or physiotherapy programme that the patient has carried out to check the treatment received, providing details of the techniques used: quadriceps strengthening, passive and active mobilisations, strengthening by means of loads or eccentric contractions... it is essential to understand the patient's recovery and the ROM of the knee that has been operated on.

Answer:

Thank you very much for your comments. From the public data, the prevalence of hemophilia among males was estimated to be 5.5/100,000 in mainland China, and there were altogether 16,083 patients with hemophilia A and 2447 patients with hemophilia B registered in mainland China in 2019. We have added relevant content to the revision manuscript.

Physical therapy was also added in the “Outcome and Follow-Up” part in the revision manuscript.