

Article information: <https://dx.doi.org/10.21037/aoj-22-18>

Reviewer A

The authors have reported a retrospective evaluation of a new implant and report high failure rates, which is important for patient safety.

Some comments to consider

1. The implant has a novel application of a multilayer coating to this uni device. The implant is also potentially a new design but it is not clear from the paper whether it is a new design or new application of the coating on an existing design. This is an important detail to include.

INCLUDED AS SUGGESTED.

2. The coating is attributed to the increased failure rate as a consequence of cement debonding at the implant cement surface. Image 4, 5 and 9 depict cement adhering on the implant surface, which is inconsistent with the proposed mode of failure.

CHANGED AS SUGGESTED.

3. Can the authors add further detail to describe which components failed and what interphase. Eg was it mostly tibia, femur, or both? See question #4 **INCLUDED AS SUGGESTED.**

4. Figure 2 depicts a lateral image where the posterior tibial cement mantle is demonstrably thicker. Although not reported we have experience with a failure mode unique to uni's where the surgeons did not appreciate the need to pressurize the posterior tibial component leading to early failures and could be a plausible explanation. I know of a design surgeon, who had 8 of his initial 8 fail by this method.

5. Duration of follow-up is not reported. Please include this. The two year results are included but a three year 'estimate' requires validation if included. **INCLUDED AS SUGGESTED.**

6. line 192. The subjective term prematurely should be removed. **REMOVED AS SUGGESTED.**

7. table 2 please define what 33%(15%,47%) is etc. **CORRECTED**
8. figure 7 shows a non significant finding and can be removed. **REMOVED**
9. line 237. The authors propose a reason for the ‘debonding’ observed. Can they expand their reasoning why it fails with this implant but not with the predicated device, the Columbus TKR which has a successful pedigree using this surface coating. **MORE EXPLAINED..**

Reviewer B

The authors of the study provide results of a new anti-allergic coated UCA System. High failure rates are present, and the results are from interest for the community. In general interesting study but some changes have to be made...

Abstract: Appropriate. **OK**

Line 35: most cases.... Please provide rate (%). **CORRECTED AS SUGGESTED.**

Introduction: Appropriate. **OK.**

Methods and Materials: Appropriate, some changes necessary

Line 82: Please provide further Details: Name of the Ethics committee and Hospital, number of approval.... **INCLUDED AS SUGGESTED.**

Line 94-96: Please rephrase and explain the indication for UKA in short: Medial KL grade 3-4, lateral compartment no Arthritis, Ligament status, patellofemoral status....

Line 97-99: Better to just state that all UCAs were cemented in this case series

Line 100: February 2020. **CORRECTED**

Line 116: Figure 2 a + b rather belong to the results section. **CORRECTED AS SUGGESTED.**

Results:

Line 182 – 185: try not to double the information (text AND table) just state “demographic data is shown in Table 1. **CORRECTED AS SUGGESTED**

Discussion:

In the beginning of the discussion state: The main finding of the current study is/ are....

Please try to shorten this section, interesting but a bit too long to read. **REDUCED.**

Conclusion: Appropriate **OK**

References: Appropriate. **OK.**