

## 24189-Answering reviewers

Here below is the response or rebuttal to the reviewers.

Reviewer's code: 01202237

It is a Interesting and well written short article. 1. the small n. - need correction to number. 2. For easy understanding, the meaning of cosinor and the reason of The peak, which is Oct 1, need to have explanation in detail.

1. I corrected 'small n.' to 'small number' in line 129.
2. We described the cosinor analysis and the way it is calculated in the Materials and Methods section in line 108-118. Basically the weather has cyclic change throughout the year and we applied the obtained number to the cosine curve. The reason of the peak, October 1<sup>st</sup>, is because it recorded highest number in OA patients and it fits the best curve according to the data.

Reviewer's code: 00503631

It is a retrospective study with a high interest topic, but the extent of the manuscript is not as long as would be expected from a research article. The section of discussion is not detailed enough. The authors didn't provide explanations for the main finding of the research, so the relevance of the results is unconvincing. The small number of citations also reduces the quality of the manuscript. The studied patients were divided into two groups according their births: in winter and non-winter months. In my opinion, investigating all four seasons could be more effective way for supporting the seasonal variation in adults undergoing total hip arthroplasty.

1. The reviewer gave us a good point. We made a through discussion written from line 155 to line 172. We also quoted more citation from 12 to 24. The exact reason why winter birth resulted in high prevalence of OA and DDH unfortunately, but we made our conclusion based on a solid data and valid references. We believe this study complement to the past researches and contribute to the epidemiology of hip arthritis.