Reviewer's report

Title: Prophylactic Antibiotic Regimens In Tumor Surgery (PARITY) Survey

Version: 2 Date: 22 November 2011

Reviewer: Danielle Petruccelli

Reviewer's report:

There certainly is a lack of literature specific to prophylactic antibiotic regimens/guidelines in orthopaedic surgery, which leads to differing opinions and varied practice amongst orthopaedic surgeons. This survey study specific to prophylactic antibiotic regimens in tumor surgery amongst both Canadian and US orthopaedic oncologists is a very well designed study which employed good methodological rigor, yielding robust results. I applaud the authors for taking initial steps toward determining the feasibility of conducting a multi-national randomized controlled clinical trial to evaluate prophylactic antibiotic drug regimens for orthopaedic oncology patients. Varied surgeon opinions and a paucity of trials in this regard certainly point to a need for this work, and hopefully the results of such a trial would stimulate further trials in other areas of orthopaedic research, specifically in the field of hip and knee arthroplasty which also lacks definitive evidence and consensus amongst surgeons in regard to prophylactic antibiotic regimens prior to surgery.

Major Compulsory Revisions

1. The sample size formula provided in the Methods; Sample Size section appears to be incorrect. Given the formula provided along with parameters indicated, the formula yields a sample size of 9.4. I do believe the sample size formula should appear as:

\[ N = z^2\left(\frac{p(1-p)}{w^2}\right) \]

This formula yields a sample size of 36.9.

2. In the Manuscript Methods, Sample Size justification the authors state that 369 completed questionnaires would be required to produce a 95% confidence interval. I believe this was a typing error and should be 36.9 as calculated using the above formula.

Minor Essential Revisions

3. In the Abstract, Results, first sentence, the authors indicate that 97 surgeons received the questionnaire, however in the Manuscript Methods, Sample Size, second paragraph: the authors indicate that a total of 96 surgeons were approached to participate. Please confirm sample size in both abstract and manuscript.

4. The references are not cited consecutively in order of appearance. For
example, in the Background section, end of first paragraph last sentence: references 2,3,4,5, and 10 are cited, in the next paragraph, first sentence: references 2,3,5 and 6 are cited.

Minor Issues Not for Publication

I find the following sentences read awkwardly and could be revised to improve readability as follows:

5. Methods, Pretesting and Validity Assessments, second paragraph, third sentence. “Section B sought information regarding surgeons’ management of oncology cases, specifically with regard to how long after chemotherapy, and at what white blood cell count surgical resection of the long bone sarcoma should be performed.”

6. Methods, Questionnaire Administration, first sentence: remove comma after “…were surveyed” and remove comma after “voluntarily”.

7. Authors’ contributions section: “KH carried out and assisted…”.

Level of interest: An exceptional article

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:

I declare that I have no competing interests.