Author’s response to reviews

Title: Prepubertal onset of slipped capital femoral epiphysis associated with hypothyroidism: a case report and literature review

Authors:

Saori Kadowaki (saori222n@yahoo.co.jp)
Tomohiro Hori (hori-gif@umin.org)
Hideki Matsumoto (mailto:matsumoto@gmail.com)
Kaori Kanda (kaori_780913@yahoo.co.jp)
Michio Ozeki (michioo@gifu-u.ac.jp)
Yu Shirakami (shrkmyu@yahoo.co.jp)
Norio Kawamoto (noriok-gif@umin.ac.jp)
Hidenori Ohnishi (ohnishih@gifu-u.ac.jp)
Toshiyuki Fukao (toshi-gif@umin.net)

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Author’s response to reviews:

Tim Shipley
Executive Editor
BMC Endocrine Disorders
26 July 2017

Re: BMC Endocrine Disorders No. BEND-D-17-00126
Dear Dr. Shipley,

Thank you for reviewing our article, "Prepubertal onset of slipped capital femoral epiphysis associated with hypothyroidism: a case report and literature review."

We have revised the manuscript according to the Reviewers’ and Editor’s comments. Our Responses to the Reviewers’ comments” appear in the following pages. All changes in the revised manuscript are highlighted in yellow or highlighted by red color. The latter changes were made by English editing service (Edanz).

We hope that the revised manuscript is now suitable for publication in BMC Endocrine Disorders. We look forward to hearing from you at your earliest convenience.

Please address all correspondence to: Dr. Tomohiro Hori, Department of Pediatrics, Graduate School of Medicine, Gifu University, 1-1 Yanagido, Gifu, Gifu 501-1194, Japan. Tel: 81-58-230-6386; Fax: 81-58-230-6387; e-mail: hori-gif@umin.org

Sincerely yours,

Tomohiro Hori, MD, PhD

Replies to Reviewers’ Comments

To the Reviewers: Thank you for the time and effort you put into your reviews. Your invaluable comments and suggestions helped improve our manuscript immensely.

Reviewer 1

I would rate this submission as a well written and pertinent review. However, when I carried out a recent literature search of SCFE and endocrinopathies I identified a number of recent papers which I felt were pertinent to your review and which underlined the salient points that in your opinion made your report unique. I would draw your attention in particular to Moyer et al 2016;29 (4)427 which was published in the Journal of Pediatric Endocrinology and Metabolism.
Also Epidemiology and demographics of SCFE by Loder RT and Skopelja EN ISRN Orthopaedics 2011;2011:486512 which reviews and confirms the lower incidence of SCFE in children with thyroid disorders. I would recommend a further review of the literature with attention to these and similar papers and an expansion of your discussion before this article would be acceptable for publication with up to date information. There are minor grammatical errors throughout the paper which would be worth attending to. Reporting this case if of value to the wider endocrine community with some additional input.

Response: We thank you for taking time to review our manuscript. We are very pleased to hear your comment that, “I would rate this submission as a well written and pertinent review.” According to your suggestion, we added the text (see below) and have referred to the reports by Moyer et al. [18] and Loder and Skopelja [3]. As for the grammatical errors, we have asked the English editing service Edanz to correct them.

Revised text (page 5):

"SCFE, a rare disease, is known to be strongly associated with obesity. Most patients develop SCFE during puberty. The majority of SCFE cases are idiopathic, although, atypically, SCFEs may be due to an endocrine disorder, renal failure, osteodystrophy, or radiation therapy. The current incidence of SCFE in children 8–15 years of age ranges from 0.33/100,000 to 24.58/100,000, depending on sex and ethnicity [3]. From 1976 to 2002 in Japan, the incidence of SCFE in those 10–14 years of age increased from a range of 0.3–0.5 to 2.22/100,000 in boys and from 0.05–0.08 to 0.76 in girls [4]. Thus, the incidence has increased approximately 5-fold in boys and 10-fold in girls, bringing it closer to the figures in other countries. The main cause for the increased numbers of SCFE in Japanese children is thought to be obesity."

Revised text (pages 10-11):

"Moyer et al. [18] recommended that thyroid function screening be conducted in patients suffering from SCFE with an atypical presentation, which could include those presenting at <10 or >16 years of age, those with bilateral SCFE, and/or those whose height is ≤10% of normal for age and sex."

Reviewer 2

This is an interesting case and comprehensive literature review. I have no fault to find with the methodology of the paper. The English language usage however is suboptimal and should be revised
Response: We thank you for taking the time to review our manuscript. We were happy to hear your general comments. As for the grammatical errors, we have asked the English editing service Edanz to correct them.

Page 5: do the authors have any suggestions as to why this disorder is so much more common in UK / USA than in Japan? Do they feel this is all obesity related?

Response: Yes, we do think that it is related to obesity. According to your suggestion, we added the following text on page 5.

"From 1976 to 2002 in Japan, the incidence of SCFE in those 10–14 years of age increased from a range of 0.3–0.5 to 2.22/100,000 in boys and from 0.05–0.08 to 0.76 in girls [4]. Thus, the incidence has increased approximately 5-fold in boys and 10-fold in girls, bringing it closer to the figures in other countries. The main cause for the increased numbers of SCFE in Japanese children is thought to be obesity."

Page 6 line 19: no need to say "free thyroxine 4" - the 4 is superfluous.

Response: Thank you for comment. We corrected the phrase according to your comments.

"Blood tests revealed hepatic dysfunction and hypercholesterolemia, with a very low free thyroxine level of 0.10 ng/dl...."

Page 6: what other investigations were undertaken on the child? Presumably the ACTH, GH axes were tested via dynamic function testing? Details need to be given about this.

Response: Thank you for your comments. According to this suggestion, we added a description of the patient’s arginine stimulation test and human corticotropin-releasing hormone stimulation test findings, as follows.

Revised text (page 7):

"An arginine stimulation test (0.5 g/kg infused intravenously over 30 min) showed a normal growth hormone response (peak 7.26 ng/ml). Also, a human corticotropin-releasing hormone stimulation test (1.5 µg/kg infused intravenously) showed a normal adrenocorticotropic hormone response (peak 48.4 pg/ml) and cortisol response (peak 14.4 µg/dl)."
Again, thank you for the time and effort to review our manuscript. We hope we have addressed all your concerns.