Reviewer's report

Title: Trajectories of height, weight, and bone mineral density of preterm newborns within the 12 months of age in China

Version: 2 Date: 12 April 2015

Reviewer: Elisabeth Olhager

Reviewer's report:

Review:
"Trajectories of height, weight, and bone mineral density of preterm newborns within the 12 months of age in China"
Zhao Z et al.

The comments are for major compulsory revision.

Manuscript
1. Introduction
Page 4, line 2-9. This part is about extremely preterm infants. The study includes also more mature preterm infants. The introduction does not describe well enough why it was important to also use DEXA.
The study that has been carried out is very important, but it must be clearly stated why it was carried out. The question is not well defined but I do believe the study is important.

2. Methods
Page 5, line 11-22, Study population: How was gestational age defined. Ultrasound, in what week?
Page 6, line 8-18, Bone Mineral Density: Never use an abbreviation in a title. How long did the examination take? How did the authors justified that there was no movements?
Was any infant excluded because of movement?
How did the authors justified that the numbers of infants in each group were enough for statistical calculations?
Page 6, line 20-24, Covariant measurements: Why was this data collected? How does the mothers calcium supplementation and outdoor activity correlates with weight, height and BMD in the infant? That must be commented in the introduction or in the discussion.
Page 7, line 1, Data analysis:
It is states that “measurements height and weight once randomly...”. This is
unclear and what does it mean?

3. Results
Page 7, line 22: the use of word “smaller” is not correct.

Growth in preterm infants is associated with morbidities. Thus, in the results, there should be noticed something about the infants morbidity during the neonatal period. How many had bronchopulmonary dysplasia (BPD), intraventricular haemorrhage (IVH), retinopathy och prematurity (ROP) periventricular leukomalaci (PVL) and necrotizing enterocolitis (NEC) at discharge?

There are also missing data on how the infants were fed. Breastfed? Formulafed?

Table 1: Only means are presented. It is very valuable to have SD as well. Infants below 28.9 weeks seems to have I high men weight. How many infants were below 26 weeks?

4. Figures
The figures are genuine.

5, 6, 7, 8. Discussion
Comments are needed on:
Why was mothers education, mothers age at birth, gestational age, weight gain, calcium supplementation and outdoor activities chosen as confounding factors? This should be discussed further. Why did not the authors chose preeclampsia, diabetes, smoking as confounding factors. These factors affect growth in preterm and infants.

How does feeding regimes affect growth? There should be a discussion on how the feeding regimes in China affects growth.

China is a very large country and has a huge population. Are these data applicable on the whole population in China or just a part of the country?

Page 11, line 6-9: Are there data on morbidities and feeding regimes? If not, this should be comment as a limitation.

9. Title
The title state “trajectories of height..etc of preterm newborns with in the 12 months of age…” Preterm infants are not newborn when they are 12 months of age. The title should be change.
“…of preterm infants within the first 12 months corrected age in China…”

Abstract
Is well written and convey what has been found.

10. The writing could be improved by having it corrected by a native English spoken language adviser.
Level of interest: An article of importance in its field

Quality of written English: Needs some language corrections before being published

Statistical review: Yes, and I have assessed the statistics in my report.

Declaration of competing interests:

I declare that I have no competing interests.