Reviewer's report

Title: Long-term oxytocin administration improves social behaviors in a girl with autistic disorder

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Reviewer: Kazuyuki Shinohara

Reviewer's report:

This paper presents a case of autistic girl who was treated with long-term nasal administration of oxytocin. On the basis of the case, the authors claim the possibility that nasal oxytocin administration can cure autistic behaviors including impairments in social behavior in female patients without adverse side-effects.

Researchers have only recently started investigating the effects of oxytocin administration to autistic population. From this perspective, the present paper has potential to add valuable knowledge regarding the efficacies of this type of treatment. At the same time, this paper suffers from insufficient descriptions of the case, which limits the impact of this report. Thus, I recommend re-considering the publication of this manuscript after the authors make substantial revisions.

Major Compulsory Revisions

1. My biggest concern about this report is the reliability of severity assessment. The authors assessed the symptom severity mainly by CGI and ABC, both of which are generally considered to be subjective evaluation scale. CGI rating can be influenced by rater's expectations about the efficacy of treatment. What is more, it reads from the manuscript that ABC was completed by the patient's mother, who asked for the oxytocin administration in the first place. This makes it quite conceivable that the improvement in ABC scores reflect wishful thinking rather than substantial improvements in patient's condition. Apparently, the authors must do a better job to increase the persuasiveness of this report by adding more detailed descriptions about clinical observations and the changes in patient's behaviors. In addition, the authors at least admit the potential problems in symptom severity assessment by subjective scales in Discussion.

2. Authors claim that the girl did not exhibit any obvious adverse side-effects after oxytocin administration. However, details about the procedure of checking the side-effects are not available in the manuscript.

Minor Essential Revisions

1. The authors should exclude the potential effects of confounding factors. This is important especially because the oxytocin administration lasted for relatively long-period (~six months). Isn't there any possibility that the claimed improvements in social behaviors can be attributable to any other medications or the effects of intervention programs?
2. The term "significant" should be used more cautiously.

**Level of interest:** An article of importance in its field

**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