Author's response to reviews

Title: Hair shaft structures in EDAR induced ectodermal dysplasia

Authors:

Christina Stecksén-Blicks (christina.stecksen-blicks@umu.se)
Catarina Falk (catarina.falk.kieri@umu.se)
David Hägg (david.hagg@umu.se)
Marcus Schmitt-Egenolf (marcus.schmitt-egenolf@umu.se)

Version: 2 Date: 18 August 2015

Author's response to reviews: see over
Thank you for your response to our submission MS: 9288540771600918. Hair shaft structures in EDAR induced ectodermal dysplasia. We have carefully considered the point raised by the reviewers and adhered to their comments. Below, please find our response to the reviewers.

Reviewer number 1.
1. In the results section on page 6, paragraph 1, line 1, define “scale structure” of hair.

Answer: We have inserted “hair cuticle” and it now reads scale structure of cuticle layer in text and in Tables 1 and 2.

2. Also in the results section on page 6, paragraph 2, line 1, define severity of deformation. What is the difference between deep and superficial?

Answer: Superficial is defined as no obvious grooves present and deep as obvious grooves present. Definition inserted in Tables 1 and 2.

Discretionary comments
3. In the discussion section on page 8, paragraph 1, it would be interesting to add a comparison with Edar mouse models (e.g., Sleek). Does the Edar mouse have a hair phenotype similar to the decreased diameter or twist hair phenotypes in HED individuals?

Answer: We have searched the literature about hair phenotype in Edar deficient mouse but have not found any data that is relevant for comparison with human hair.

Level of interest: An article whose findings are important to those with closely related research interests.

Answer: Thank you!

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

Answer: We have checked language and grammar and performed some corrections.

Reviewer number 2.
Though the mutation is recurrent but the data of three families is appreciable. The work presented on hair shaft has added novel information regarding nonsense mutation in EDAR gene. I have following suggestions

1. In materials and methods a male individual completely bald but WITH KNOWN MUTATION has been described. but he was excluded from the study. was he investigated by the expert dermatologist? Was he bald since childhood or later
stages of life? Was his biopsy done? If No, then I would suggest that his biopsy should be performed so that hair structures like hair papilla, hair bulb and hair follicle, if present, are being studied. This would help to define phenotypic variability among affected members of one family or group of affected individuals of same race.

Answer, Thank you for the comment! We agree to that skin biopsies might have increased knowledge about phenotypic variability. However, as we have no ethical permission for biopsies it is not possible to collect them for the present study.

2- I suggest that clinical picture of affected member whose hair shaft deformations are shown should be presented along with mutation sequencing chromatogram.

Answer; The ethical permission for this study does not include a general permission to publish clinical pictures. In a previous paper, reference no 17 Lind et al 2007 BMC Med Genet 2006, 7:80 we published DHPLC and sequence variance for the mutation. Some of these individuals are participants in the present study. Later we characterized individuals with the mutation (heterozygous c.1072C>T mutation (p.ARG358X) in the EDAR gene) with respect to dental signs and symptoms from other ectodermal structures but not hair and DNA from all participants were screened for confirmation of the mutation. We have inserted a new sentence in paragraph 1 in the discussion with reference to the publicication were the the mutation is described.

Minor Essential Revisions
1- Legends of figures 2, 3, 4 a-d are incomplete or not properly described. I would suggest figures should be in a panel of a,b,c....

Answer; We agree and have corrected them.

2- In discussion where author has given reference 9, it seems as if this is his work. These sentences should be rephrased.

Answer; ref no 9 is not our work. We suspect that it is a miswriting by the reviewer and you might refer to no 16. We have made changes according to this in page 8, second para.

Additionally, we have inserted a section with Authors`contribution.

With these changes we now hope that our paper can be accepted for publication.

For the authors

Christina Stecksén-Blicks
Professor
Pediatric Dentistry
Department of Odontology
Faculty of Medicine
Umeå University
SE 90 185 Umeå, Sweden
+46 90 7856235 office, +46 730 612050 mobile
Christina.stecksen-blicks@odont.umu.se