

March 23, 2022

To Whom It May Concern:

RE: Matter of Cain Michael Layman DOB: October 28, 2021

In the above matter I have had the opportunity to review limited information and pictures of X-rays that the mother sent me. Most helpful was the report of Dr. Michael Holick. I was asked to review this matter at the last minute to see if there might be a medical explanation for the multiple unexplained fractures (MUF) in this infant.

Narrative

Cain Layman is presently a 5 month old male. The pregnancy was complicated by decreased fetal movement.

He presented at 3 weeks of age with MUF and easy bruising. Child abuse was alleged.

Evaluation by Dr. Holick showed both parents had the hypermobile form of Ehlers Danlos Syndrome and Cain Michael had joint hypermobility.

Interpretation

Cain Michael Layman is presently a 5 month old male who presented at 3 weeks of age with MUF and easy bruising. While child abuse is in the differential diagnosis for this presentation, there are observations that this is unlikely child abuse, and that the fractures are fragility fractures from Metabolic Bone Disease (MBD) [1].

My review of pictures of the X-rays shows wide and cupped ribs and subperiosteal new bone formation of multiple long bones. These X-ray findings are consistent with MBD.

There are risk factors for MBD including decreased fetal movement and h-EDS in both parents and joint hypermobility in Cain Michael Layman [1].

In summary, I believe the most likely explanation for the MUF in Cain Michael Layman is MBD from the multiple risk factors previously noted. The X-rays show poor bone mineralization which is consistent with MBD.

I have evaluated over 1,000 cases of infants with MUF in the past 27 years and have published my findings in peer-reviewed journals as indicated in my CV.

Sincerely yours,

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Disclaimer: The opinion in this report is my own and does not reflect that of the two institutions I am affiliated with: Wright State University Boonshoft School of Medicine and Dayton Children's Hospital.

If new information becomes available, I reserve the right to modify my report accordingly.

References

I. Miller M, Stolfi A, Ayoub D. Findings of metabolic bone disease in infants with unexplained fractures in contested child abuse investigations: a case series of 75 infants. *Journal of pediatric endocrinology and metabolism*. 2019 Oct 25;32(10):1103-20.