



To Whom It May Concern
From: Deanna W. Adkins, MD
RE: Micah Dover

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Mary Peele, mother of Micah Dover, came to my clinic because she is concerned that her son has a metabolic bone disease. She was present without Micah. She reported to me that Micah was taken to the hospital in May 2015 and July 2015 with concerns for fractures by the mother. The films from May were normal. The films from July showed multiple posterior rib fractures and an acromion fracture. Mom noted that there was no known trauma to the infant that she was aware of.

I have reviewed the data from WakeMed hospital including all the labs and all of the xrays. He had signs of rickets on his skeletal survey in the ribs. On the follow up skeletal survey there was even evidence of healing rickets in the long bones as well. His 1,25 vitamin D was too high to measure and the 25 vitamin D was low at 19. The alkaline phosphatase was not that elevated at 330 but was certainly slightly elevated. The PTH's were normal which does not fit with very high 1, 25 vit D levels. It is possible that the PTH specimens were not processed promptly which can lead to falsely low values. However, given the disparity in the labs one cannot fully rule out a bone disease.

He also had very elevated ALT and AST which was thought by the hospital to be related to a possible nick in the liver with trauma. However he was not anemic suggesting he was bleeding from the liver which would be typical if there was a nick. In addition, these levels were never followed up or fully evaluated which has me concerned that an underlying liver disease could still be present and is being missed.

With regard to Micah's history, he had prolonged jaundice at birth which may have been related to being exclusively breast fed. Exclusive breast feeding of infants, especially those with dark skin, is a well known risk factor for vitamin D deficiency and rickets in the infants. Mom was taking him out in the sun uncovered in July to try to get more vitamin formed in his skin because she knew he was at risk. He was only on vitamins for about 4 days. Mom was told that he needed them, but she did not give them as recommended. She reports that she thought the sun exposure would keep his vitamin D up.

Micah was discharged from the hospital on vitamin D to treat his deficiency with foster family and on formula so healing was under way at that time. Micah had clearly healed by the follow up skeletal survey in November. The bones looked much better and more calcified. I am, however, concerned that there is still an abnormality as the 1, 25 D levels never normalized and the liver functions were never rechecked. I think it is very possible that there is an abnormality here that hasn't been identified yet. His testing for osteogenesis imperfect was negative for the 2 most common gene defects only.

When we look at the family history, mom raises additional concerns. She was recently diagnosed with Ehler's Danlos Syndrome, has poor dentition, is intolerant to milk, and took tums during the pregnancy. She also only occasionally yogurt as a calcium source so likely also has low calcium as well. She was not able to tolerate her prenatal vitamins well. She is of mixed race with dark skin and the patient's father is African American. These elements of mom and dad's histories put him at even more risk for vitamin D deficiency and rickets including that he was exclusively breast fed until he was taken from his parents.

Based on the above information obtained from the medical records and from mom's history, I believe that at the time of the hospital visit in July, Micah had neonatal rickets that were just beginning to recover. He was certainly at risk for fragility fractures. I am concerned that there is still a possibility that he has some other medical issues that need to be addressed and followed up on including his bone metabolism and his liver functions.

A handwritten signature in black ink, appearing to read 'Deanna W. Adkins' with a stylized flourish at the end.

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