

A Case of Severe Insulin Resistance

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Introduction

Read the following story titled “Megan, Jade, and Joanna” to get started on this case.

Jade and Megan have been best friends since second grade. While in school they spent a lot of time in each other’s homes. Jade’s older sister, Joanna, was their favorite go-to person – for help with school projects, personal advice, teenage troubles, and so much more. A few years ago, Joanna got married and now lives with her husband and little baby girl.

Currently the three of them live in different cities – Megan is in Boston, majoring in Biochemistry at Boston College; Jade is in Los Angeles studying to become a pianist; and Joanna is a nurse practitioner in Texas. Last month, Jade called Megan on a Sunday afternoon and anxiously said – “Do you know Joanna told me that she was recently diagnosed with Diabetes, something about insulin resistance or something?” “She is just 32, not obese, you know, and is very particular about what she eats and stuff”. Megan sensed that Jade was worried. She knew Jade’s mom and grandma had been diagnosed with diabetes in their thirties too, so she wondered if Jade was worrying about developing diabetes herself. That afternoon they talked on the phone for an hour about family history, food, obesity, and diabetes. By the time Jade hung up, Megan was seriously thinking about Jade’s chances of getting diabetes, and for that matter, Joanna’s baby girl too.

The next morning Megan started searching online to see if I could learn about diabetes running in families. She wanted to understand if diabetes could indeed be inherited. Searching through PubMed Megan read about Maturity Onset Diabetes of the Young (MODY) but brushed it aside. She also believed that since Joanna is in the healthcare field, she must have thought about this and looked into getting tested. Megan wanted to learn more about insulin resistance. One particular paper that really caught her attention was titled “A Family with Severe Insulin Resistance and Diabetes Due to a Mutation in AKT2”. The family tree shown in the paper seemed very much like Jade’s family, so she became curious and opened the paper to read it in detail.

Box 1: Resource

PubMed: a free online search engine for scientific literature on biological and biomedical topics with links to access their abstracts and full articles.