“Pediatric Insulin Resistance and PCOS”

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By Lesa Childers

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An interview section with Advisory Board member Lesa Childers. Childers is a PCOSupport Chapter Development Coordinator and is the founder of WNC PCOSupport. A great advocate for PCOS education, Childers meets many doctors and medical professionals in her work with PCOSupport. This section will highlight different health professionals discussing their work related to Polycystic Ovary Syndrome.

Hello Everyone – This has been such a busy year!

However, I did find the time to travel to Valley Forge, PA for the 2001 PCOSupport International Conference. What a wonderful event that was for all who attended! While I missed my family and comfortable home in mountains of NC, I welcomed the opportunity to escape my stressful daily work grind (I am a social worker at a mental health agency) to interact with others as passionate about PCOS education and patient advocacy as I am. Temporarily away from the responsibility of raising two children (three, if you count my husband!), I was able to rise early each morning and hit the hotel gym for an invigorating workout. During these AM exercise sessions, I met a very interesting woman and great new friend, Dr. Selma Witchel. From the treadmill next to me, Dr. Witchel introduced herself and told me that she was making a presentation at the conference regarding “PCOS: Origins in Childhood.” Having a young daughter myself, I was very excited about the opportunity to discuss this topic in depth with her. So, Dr. Witchel and I spent our morning workouts discussing PCOS presentation in young females, possible treatment options and lifestyle strategies to address resistance in children. Yet another hormone expert was subjected to the “Lesa Childers Interrogation Process”!!

Following the conference, I contacted Dr. Witchel to request an interview for “Chats with Childers” and she has been very kind to oblige me stating, “I am happy to help as this is a very important issue for our children.”

Thank you, Dr. Witchel, for what you do to help children each day and for your willingness to share your expertise with us......Your workout buddy, Lesa.

Dr. Witchel, tell me about yourself -- where do you practice and what is your focus?

I am a pediatric endocrinologist at the Children's Hospital of Pittsburgh. I see children with all types of endocrine disorders, but my particular focus is on children with disorders of puberty, congenital adrenal hyperplasia, and cryptorchidism. I am especially interested in understanding the etiology (including genetics) of and the natural history for children with premature pubic hair.

Do you find that you are seeing more children with the symptoms of insulin resistance in your work?

Similar to pediatric endocrinologists in many areas, we are seeing more children with insulin resistance, impaired glucose tolerance and mellitus. We are also seeing more children with early development of puberty especially premature pubic hair.

If so, why do you think this is the case?

The American lifestyle has evolved to be more sedentary with increased availability of high calorie
As we know, girls who are insulin resistant are at an increased risk of developing Polycystic Ovarian Syndrome. What symptoms do you most often see in girls who are experiencing signs of early PCOS?

The earliest manifestation of PCOS for some girls is the premature development of pubic hair. By premature, I’m referring to pubic hair prior to age 7-8 years. However, not all girls with premature pubic hair develop PCOS. So, there must be some factors - hormonal, genetic, and/or environmental - which influence outcome. For some girls, the symptoms do not appear until early puberty when excessive facial hair or acne develops or menses remain irregular for greater than 18-24 months after menarche. And, some girls do not develop symptoms until after puberty.

**What advice or treatment options do you offer for your young patients with PCOS symptoms?**

Lifestyle interventions are crucial. Lifestyle adaptations include healthy nutritious meals with avoidance of high low, low nutrient foods and beverages, not eating in front of the TV set, and regular exercise. Children do not need to clean their plates. For children with documented (by blood testing under the supervision of a pediatric endocrinologist or other qualified physician) impaired glucose tolerance or , medication may be indicated. Therapy needs to be individualized to the patient and family, so it's impossible to offer "blanket" advice for all.

**Could you discuss precocious (early) puberty, particularly in girls, and how this may relate to PCOS?**

, puberty consists of two components, breast and pubic hair development. Typically, breast development precedes pubic hair development. But, both processes can occur simultaneously. Traditionally, puberty has been considered to be "early" or "premature" if breast buds or pubic hair develop prior to age 8 years. This figure was selected largely by statistics based on the mean age for pubertal development. Premature pubic hair is also called premature pubarche. The most common causes of premature pubarche are premature adrenarche which is the early onset of normal adrenal pubertal maturation or mild congenital adrenal hyperplasia. Congenital adrenal hyperplasia is an inherited disease affecting cortisol synthesis by the adrenal gland.

Retrospective studies have suggested that the development of pubic hair prematurely may be associated with an increased risk for PCOS. Additional circumstantial evidence includes finding insulin resistance among girls with premature pubarche and a higher incidence of type 2 among the first-degree relatives of girls with premature pubarche.

However, minimal prospective longitudinal data are available to confirm that premature pubic hair is the earliest manifestation of PCOS. So, longitudinal evaluations of girls with early pubic hair - preferably in a research setting is crucial.

**As a woman with PCOS and the mother of a biological daughter, what advice would you give to me? Is there a way to "prevent" my daughter from developing insulin resistance and/or PCOS?**

I would advocate a healthy lifestyle with nutritional foods and regular exercise. Only through research studies as alluded to above will we learn if and how PCOS can be prevented.

**Disclosures:**

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