#33 PREGNANCY IN PRADER-WILLI SYNDROME: REPORT OF TWO WOMEN WITH PWS DUE TO DEL 15Q, ONE WITH A NORMAL SON AND THE OTHER WITH A DAUGHTER WITH ANGELMAN SYNDROME, AND REVIEW OF KNOWN CASES OF PREGNANCY IN PWS.

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**Objectives:** To present two new cases of women with PWS due to del 15(q11.2-q13) and their pregnancy outcomes, to review the two published cases of pregnancy in PWS, and to determine whether standard of care should include sex education and possibly contraception in at least some cases.

**Method:** Report of two adult females with PWS, one evaluated in a medical genetics clinic along with her normal son, the other evaluated through communications and photos who had a daughter with Angelman syndrome. A search for additional pregnancies to people with PWS including among PWS clinic directors worldwide, revealed only the two well-known published reports (Akefeldt et al. 1999 and Schultze et al. 2001). Literature on hypogonadism in PWS was reviewed.

**Results:** Our patient was a 34 year old woman with typical PWS due to deletion 15q. She had menarche at age 21 and subsequent reportedly regular menstruation. No psychotropic medications. At 27 years of age, she was found to be pregnant with a 7 month fetus when investigated for rapid weight gain and unexplained pedal edema. A normal male was delivered by C-section at term. He was seen at age 8 years; genetic testing was normal. A woman in New Zealand (evaluated by email, records and telephone conversation with family members) had PWS due to del 15q, with menarche at 20 years, about 10 periods a year. She took Citalopram for 2 years before pregnancy. She got pregnant at 31 years and her daughter has Angelman syndrome. Both women (and one published woman) had significant weight loss prior to pregnancy.

**Conclusions:** Hypogonadism is a major consensus clinical diagnostic criterion for PWS and contributes significantly to the pathogenesis, physical features and natural history. It usually manifests as genital hypoplasia, delayed and incomplete pubertal development, and infertility. The hypogonadism involves both hypothalamic and primary gonadal abnormality. Most females demonstrate either primary amenorrhea or oligomenorrhea with delayed menarche. The extent of sexual activity in adults is unknown. There are no known offspring of males with PWS. Our cases and the published cases of pregnancy in PWS indicate that infertility is not consistent in females. We will review the extreme variability in manifestations of hypogonadism, and speculation as to which women with PWS might be fertile. The presence of PWS should not preclude the possibility of pregnancy without testing, and sex education and discussion of contraception should be part of management of women with PWS.

**Lay Summary**

We present information about two women with PWS due to deletion 15q who successfully carried pregnancies to term, one personally evaluated and one evaluated through interview and records review. One had a normal child and the other a child with Angelman syndrome due to inheritance of a deletion on the maternally-inherited chromosome 15. We compared
these two women and the two published cases of fertility to look for common features. Other than significant weight loss prior to the pregnancy in 3 of the 4, the other never being obese, no predictive factors were evident. It is possible that fertility in a few women just reflects variability in hypogonadism and absence of opportunity in others who are potentially fertile. We conclude that education of families concerning the possibility of pregnancy and sex education and contraception of affected individuals should be part of the management of women with PWS.