

Greenberg Center for Skeletal Dysplasias

Potential Issues for pregnancy in dwarf women

Respiratory Issues in Pregnancy

One problem seen in pregnant women with dwarfism is respiratory problems. In very small women (3 1/2-4 ft), the uterus is already an abdominal organ because of a short anteroposterior diameter of the pelvic inlet. Therefore, the pelvis is not used for uterine growth. When the uterus then contains a growing fetus, the enlarging uterus can cause respiratory compromise.

Another cause of respiratory distress could be the presence of scoliosis and shortened trunk seen in women with spondyloepiphyseal dysplasia and osteogenesis imperfecta. In an article on pregnancy in women with dwarfism (Allanson & Hall, 1986), the authors indicate that 9/46 women had respiratory difficulties in the last two months of pregnancy. Four women had achondroplasia, one had spondyloepiphyseal dysplasia, one had vitamin D resistant rickets, and the remainder had an unknown type of skeletal dysplasia. Drs. Allanson & Hall recommend baseline pulmonary function tests be performed on short-statured patients early in pregnancy or prior to getting pregnant and then they should be repeated during the pregnancy.

Neurologic Issues in Pregnancy

A second problem that has been noted in pregnant women with dwarfism are symptoms of nerve root compression. In the Allanson & Hall paper, 5/46 women were symptomatic (they had numbness & tingling of the lower limbs). Four of the five women had achondroplasia, a type of dwarfism where the lumbar spine narrows; the other woman had vitamin D resistant rickets. It was not known, however, whether these women were symptomatic prior to pregnancy.

Mode of Delivery and Anesthesia Utilized in Pregnancy

Another important obstetrical issue is the mode of delivery and type of anesthesia utilized. The majority of infants born to women with skeletal dysplasias are delivered by elective or scheduled c-section because of small pelvic structure.

Until recently, general anesthesia was utilized because of the fear of doing a spinal or epidural block in patients with narrowed lumbar spines seen in many types of dwarfism (ie achondroplasia). It is important to remember that if general anesthesia is utilized, care must be used during intubation (the procedure where the breathing tube is

inserted into the airway). Problems during intubation can occur because of small trachea (airway) size or cervical spine instability which could damage the spinal cord. It is recommended that women with a skeletal dysplasia that involves the cervical spine should have cervical spine x-rays (flexion and extension) views performed to exclude cervical spine instability prior to anesthesia. Many women these days however, are receiving spinal and epidural anesthesia without problems (Carstoniu, J. et al., 1992 and Rodney, G.E., et al., 1991).

It is also important to note that the dose of medications used in a woman of short stature be used in proportion to her height and weight.

Increased Risk of Miscarriage

It is important to note that the Allanson & Hall study did not find an increased incidence of miscarriage or neonatal death.

References:

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4. Rodney, GE. Spondyloepiphyseal dysplasia congenita. Cesarean section under epidural anesthesia. *Anaesthesia* 46:648-650 (1991).
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