Cerebral Palsy: General Characteristics

Cerebral palsy is defined as, a group of permanent disorders affecting the movement and posture, and a person's ability to maintain balance; these disturbances can appear fetal development or the infant brain and is the, "most common physical disability of children" (Wong's 2015). Most often this disorder includes disturbances of, "sensation, perception, communication, cognition," and behavior; as well as secondary musculoskeletal and epilepsy, and is a non-progressive disorder (Wong's 2015). "The exact cause of the disorder is unknown" (Wong's 2015). There are many factors that have been listed that might contribute to the disorder such as prenatal period may include brain development problems, perinatal may include cord prolapse, hypoxia, and postnatal complications such motor vehicle accidents Kurt, 2016). The statistics reveal incidence of cerebral palsy fall between 2.4-3.6 in 1000 live births, males are more affected, and preterm babies (Wong's 2015). The rate of CP (Cerebral Palsy) is 6-10 times higher in preterm births, and a decrease since the in CP rates since the 1990s (Kurt, 2016). According to Kurt (2016), there is no test that can detect the presence or absence of CP prior to birth, as there is no exact cause of it (Kurt, 2016). Early careful assessment during infancy of muscular dysfunction and a neurologic exam can help diagnose the disorder (Wong's, 2015). Signs and symptoms of CP are categorized as follows: delayed gross motor development this is a universal manifestation, there are delays in all motor skills such as language (Wong's, 2015). My patient KP is verbally impaired from my assessment. Abnormal motor performance such as feeding difficulties, and unilateral hand preference (Wong's, 2015). KP has a G-tube for feeding and involuntary movements. Alterations in muscle tone the child feels stiff when dressing or rigid when the hip and knee joints are pulled to a sitting position; this is an early sign (Wong's, 2015). KP is stiff especially in her upper extremities such as her hands they are fisted. Abnormal postures include fisted hands, and elbow flexion (Wong's, 2015). "The most common deformity is infantile cerebral hemiplegia described as the spasticity associated with other degrees of motor and sensory deficits in the upper and lower limbs," (Leclercq, 2015). Other associated disabilities that occur with CP are seizures, sensory impairment, and alteration in learning and reasoning (Wong's, 2015). KP has tonic clonic seizures and is cognitively impaired. With these alterations mentally and physically it makes it really hard for a child to enjoy everyday aspects of life like all other children that function at the developmental level for their age. Unfortunately, there is no cure for CP, therapy and medications can be used to help symptomatically (Wong's, 2015). To start early treatment, it begins at preventing preterm birth; then treating patients who are going to deliver at early preterm with magnesium sulfate (Stavsky et al., 2017). According to Stavsky et al. (2017), in an analysis CP was reduced by 30 % in women who were treated with Magnesium sulfate who were at risk of giving preterm birth, most importantly before 28 weeks of gestation (Stavksy et al., 2017) Physical therapy, adaptive equipment devices such as wheelchairs and scooters can be a source to prevent or reduce deformity, and to help in gait (Wong's, 2015). Speech therapy, and education services can be provided (Wong's, 2015). Medications can be used to help reduce spasms such as Botox injections and Baclofen; pharmacological use to control secondary conditions such as seizures can also be controlled by medications such as Tegretol (Wong's, 2015). Surgery is usually done at last after a child has not responded to therapeutic measures, to help with disproportions and bone alignment (Wong's, 2015). However, according to Leclercq et al. (2015), surgery performed at earlier age in the child's is more effective (Leclercq et al., 2015). Supporting the family of a child with CP is very important as it can be

exhausting to the parents who are taking care of the child physically and emotionally. A collaborative relationship between the nurse and family can help understand and problem solve difficulties about the diagnosis better. Prognosis depends on the severity of the disorder mild to moderate children have an 85% chance to be able to ambulate, not achieved by 2-7 years of age they have a poor chance of ambulating; the more medically fragile the child is the less likely it is for them to survive adulthood (Wong's, 2015).

My patient KP is 12 years old, consequence of neonatal meningitis. She is in a persistent vegetative state (pvs) along with her other diagnosis of CP, neurogenic bladder, hydrocephalus s/p pvs, on a mechanical ventilation, has seizure disorder, tracheostomy, restrictive lung disease, cardiac arrest, chronic respiratory failure, encephalopathy, osteoporosis, and rectal prolapse. She is not at Erikson's stage of development, according to her age which should be identity vs. role confusion; in which adolescents try to figure out who they are, or where they belong (Wong's, 2015) she is in a vegetative state. CP has affected her ability physically, she cannot sit or stand, she is unable move independently, and is bed bound. Her motor function is impaired, she is unable to perform activities of daily life (ADL). She is on G-tube feeding and is incontinent bowel and bladder with a Foley catheter. Cognitively she is impaired, cannot communicate verbally, think abstractly, and is deaf in both ears and wears hearing aids, and does not follow commands. KP goes to school for brain stimulation such as listening and looking at colors. According to Piaget's cognitive development she is not at the formal operational thought process (Wong's, 2015). Developmentally she is impaired as well, which relates to her being affected physically. Due to neurological damage the communication between the brain and body's muscles is not proper which affects the child physically, cognitively, and developmentally (Wong's, 2015).

Cerebral palsy is a lifelong condition that cannot be corrected, therapeutic management is essential to prevent or reduce deformities. CP can be diagnosed with early careful neurological assessment and muscular dysfunction. This disorder affects a child's life significantly if very severe, such KP. Preventions in prenatal, perinatal and postnatal period can be crucial to decrease the risk of CP. Therapeutic therapies can help children gain optimal appearance and help socialize with unaffected kids. Children who have cerebral palsy are just like other kids, but only with greater challenges that require extra help.