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Date

Von Recklinghausen's Disease

Multiple neurofibromatosis or von Recklinghausen's disease was named for Friedrich von Recklinghausen. Von Recklinghausen was born in Gutersloh, Westphalia, Germany. He received his doctorate from Berlin. He studied along with Virchow, who came up with the theory of biogenesis, which states that all life comes from pre-existing life. Von Recklinghausen made many discoveries throughout his life, but one of the most important discoveries was that tumors in multiple neurofibromatosis come from the nervous tissues (Reynolds et al.). There are two types of multiple neurofibromatosis: NF1 and NF2.

NF1 is an autosomal dominant disorder that is located on either the male or the female gene. If a male or female is a carrier for the disease, then that person's children will have a fifty percent chance of inheriting the NF1 or NF2. One out of every 4000 babies in the United States is born with NF1. Not all cases of NF1 are inherited; some cases have been reported of people getting the disease through genetic mutations. Some of the symptoms of NF1 are light-brown circles on the skin called café-au-lait macula, neurofibromas (benign tumors that form on the nerves or the nervous tissue under the dermis of the skin), freckles under the armpit or in the groin area, tumors on the optical nerve, severe scoliosis, headaches, epilepsy, and bone deformities that can be crippling. Another condition that is associated with NF1 is phaeochromocytoma (a condition where a tumor is located on the adrenal glands). This condition causes hypertension in most patients. Most patients with this condition have either

learning disabilities or speech problems. In addition, NF1 affects somatotropin hormones, which control growth. Most NF1 patients are small of stature ("Multiple Neurofibromatosis"). People with NF1 live to be approximately 54 to 59 years old, compared to 70 to 74 years for the general population (Reynolds et al.). There is no cure for NF1; doctors can only treat the symptoms of this disease. Doctors can perform surgery to remove some benign tumors or bone deformities. Chemotherapy or radiation can be used to suppress tumors ("Multiple Neurofibromatosis").

NF2 is a serious disease that occurs less frequently than NF1. Each year one out of every 33,000 – 40,000 babies is born with NF2. NF2 patients exhibit bilateral vestibular schwannoma tumors on the eighth cranial nerve of the spine (Reynolds et al.). These tumors cause most NF2 patients to lose their hearing by causing pressure on the acoustic nerve. Most patients will lose their hearing before a doctor can diagnose the disease ("Neurofibromatosis"). Other symptoms of NF2 are cataracts, meningioma, neurofibroma, schwannoma, and balancing problems due to the tumors on the vestibular nerve. Meningioma are tumors that form between the dura mater and the pia mater that cover the brain and the spinal cord. Neurofibroma are tumors under the dermis of the skin. Schwannoma are tumors that affect the Schwann cells which protect the nerve cells. Treatments for NF2 are the same as the treatments for NF1. Patients can get tumors removed from the acoustic nerve, but it can cause hearing loss. Now doctors can perform amniocentesis, which draws amniotic fluid from the womb to test for genetic disorders ("Multiple Neurofibromatosis").

As time passes, advancements in medicine may lead to a cure for this disease that affects thousands of people per year. With new discoveries on the genome project, perhaps scientists will be able to find the key to suppressing this disease. Maybe in the future there will be another von Recklinghausen who will develop a cure for multiple neurofibromatosis.

Works Cited

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