

Managing Surgical Risks in a Patient under Evaluation for Fibrodysplasia Ossificans Progressiva

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Description

Fibrodysplasia Ossificans Progressiva (FOP) is a catastrophic disorder of Heterotopic Ossification (HO) and a cause of extraskeletal bone formation in humans. It is a rare and heritable condition with rare genetic transmission. The most important thing is to avoid aggravating factors like bone biopsy, surgery, and intramuscular injection because there is no effective treatment for this disease. Fibrodysplasia ossificans progressiva (Coxcomb), as an uncommon, heritable and seriously crippling hereditary state of connective tissue and moderate heterotopic solidification, is the most devastating problem of HO and a reason for extra skeletal bone development in people. The literature indicates that this disorder affects approximately 1/2,000,000 people worldwide. There is no distinction in the disease dissemination in light of ethnic, racial, orientation, or geographic variables. The disease was depicted without precedent for 1692 thus far, in excess of 600 cases have been accounted for. It has particular clinical manifestations and is an autosomal dominant disease from a genetic standpoint.

Joint Dysfunction

FOP is portrayed by unusual solidification in the delicate tissue and diffused all through the body and reciprocal Hallux valgus (valgus deviation of the huge toe). The disease begins in infancy and gradually affects the skeletal system, resulting in joint dysfunction and immobility. The most important thing is to avoid aggravating factors like bone biopsy, surgery, and intramuscular injection. There is currently no effective treatment for this disease. Mutations in the Activin Receptor Type-1 (ACVR1) gene, which is a member of the protein family known as Bone Morphogenetic Protein (BMP) type I receptors and is evaluated in the Mendel laboratory's panel of muscle diseases, are the primary cause of this disease. Albeit a few instances of fibrodysplasia ossificans particularly cases saw after injury causes contribution of restricted organs, however the dynamic type of the illness, for example, the case introduced in this report, should be visible in all pieces of the body. This case of a 52-year-old resident of Sanandaj city, the center of the Kurdistan province in the west of Iran, who was suspected of having FOP, is

described in this report due to the disease's rarity. The woman's recovery from surgery was not complete, and she developed additional complications and movement restrictions over time.

The most crippling form of ectopic skeletogenesis is FOP. The aggregate of Coxcomb comprises of two characterizing highlights: Innate abnormality of the extraordinary toes and moderate HO in trademark anatomic examples. Albeit clinical attributes of the case introduced in our report is mostly predictable with Coxcomb, yet we were unable to preclude other illness. FOP is generally misdiagnosed as forceful adolescent fibromatosis, delicate tissue sarcoma, or lymphedema. Lymphoma, desmoids tumors, brachydactyly (a genetic condition that causes fingers and toes to be shorter than normal), isolated congenital malformations, and juvenile bunions are additional possibilities for diagnosis. FOP typically begins as expanding of delicate tissue with agony and fever, trailed by discernible solidness and lost bone arrangement. The patient under our review displays a comparative example. Patients with FOP typically have normal phosphorus and calcium levels in their labs, but acute phases may see an increase in alkaline phosphatase. Research facility discoveries of patients with FOP, including phosphorus and calcium levels, are generally typical, however alkaline phosphatase might increment in intense stages. Our patient performed well on all of these tests.

Thoracic Insufficiency Syndrome

The majority of FOP patients are wheelchair-bound during the second decade of life and typically die of complications of thoracic insufficiency syndrome, according to existing evidence. On the other hand, the age of our reported case was 52, and her physical condition has gotten worse in recent years. At the onset of disease flare-ups, corticosteroids can be used as a first-line treatment to reduce severe inflammation and tissue edema. Notwithstanding, going through a medical procedure to eliminate heterotopic bone can set off dangerous new bone development, and we noticed sickness disturbance after medical procedure endeavors for our situation. Past proof and this study's outcomes propose that careful endeavors are not emphatically suggested. While a mutation in a particular ACVR1/

ALK2 gene may, in general, be a necessary cause of HO in FOP, it is not sufficient to cause flare-ups of the disease that result in progressive disability. Deciding the job of the resistant framework, the reactions of occupant ancestor cells, and the biochemical variations of the delicate tissue microenvironment that can include in the acceptance of eruptions of the illness requires further examinations. Finally, it can be concluded that

the initial toe surgery was ineffective in halting the disease's progression. Even the disease progressed after the surgery, according to the patient's history and referrals. However, based on this evidence, it is not possible to say for sure whether or not surgery was a risk factor for the patient's condition getting worse.