

Facial Tumors (Fibrous dysplasia)

South Florida's Atlantic Center of Aesthetic & Reconstructive Surgery brings their many years of experience to the forefront in dealing with Fibrous dysplasia, or facial tumors. Fibrous dysplasia is a **benign tumor of the skeleton** that can have devastating local effects. The tumor can be mono-ostotic (in one place) or poly ostotic (in multiple places). Our Atlantic Center team deals with fibrous dysplasia that effects the craniofacial skeleton.

Fibrous dysplasia can occur at any age, but typically is noticed during mid- to late childhood. The most common area of the craniofacial skeleton to be affected is the orbit. However, lesions can develop in the skull, maxilla, mandible, zygoma, dental alveolus, or any other bone.

The tumor usually presents as a painless, firm mass or swelling. The mass is fixed and non-mobile. There is usually a slow growth process associated with these lesions. Families notice a swelling or asymmetry at was not there in pictures the year before, but now is more apparent.

The diagnosis of fibrous dysplasia is typically made via a CT Scan radiographic assessment of the lesion. The lesion erodes into the bone and give the bone a fibrotic type appearance. The bone lesion then expands beyond the normal boundaries of the bone and pushes out into the surrounding tissue. A biopsy in the operating room confirms the diagnosis of the lesion, but the lesion has such a typical appearance of CT scan that most places can make the diagnosis accurately without the biopsy.

These lesions rarely convert to a cancerous or malignant tumor. However, they can cause significant problems due to local bone destruction and mass effect. **The most dangerous complication of fibrous dysplasia is blindness.** Blindness is caused by a growth of the tumor along the lateral orbit and sphenoid bone. As the tumor grows it can extend into the optic canal and compress the optic nerve, which is nerve responsible for vision. This risk must be carefully monitored by an ophthalmologist if the tumor is in this area. These lesions can also severely distort the face, compress sensory nerves in the face giving numbness or pain, or cause teeth to be lost due to involvement in the dental roots.

Surgery generally required

Treatment of Fibrous dysplasia is primarily surgical. There are various chemotherapy drugs that effect osteoclast function that have been tried, but outcomes of drug therapy are mixed at best. Surgery can come in many forms, depending on the problem. Also, the timing of surgery can vary depending on risk to vision, symptoms, and patient desire. If the tumor involves the optic canal and is putting the vision at risk, then surgical resection of the tumor (either total or subtotal resection) with bone graft reconstruction is required. This is done in combination with a neurosurgeon who is there protecting the brain and the optic nerve. If the lesion involves other bones and is relatively small, complete resection and reconstruction with bone or alloplastic implant can be warranted.

CT Scanner often utilized

Many times, a CT scan is used to make a 3D model. From this model, the area of bone to be removed is outlined. Once the defect is created, a computer generated implant is then created to reconstruct the defect. Alternatively, in large lesions or in lesions that involve important structures such as the teeth, the fibrous dysplasia can be treatment with serial debridement rather than resection. This treatment is chosen when there is little to no risk of malignancy and the damage to the patient caused by a complete resection would be severe. Debridement and sub-total resection controls the growth of the tumor and restored facial form with little risk to many vital structures. When the teeth are affected by this tumor, **Dr. Eric Stelnicki** will work closely with **Dr. Jason Portnof (oral surgery)** to outline a proper treatment plan. Debridement can be an option; however, Virtual Surgical Planning (VSP) is also frequently employed to treat this disorder. VSP allows the doctors to take a CT scan and convert it into a 3D model for the purpose of surgical planning. With this model, the exact areas of the tumor to be removed can be outlined to the 1 mm. Then, surgical reconstruction with bone or a computer generated implant can be optimized. This allows for precise reconstruction of the anatomy destroyed by the tumor and preservation of structures such as important nerves and blood vessels in the face. If teeth must be removed or are lost due to the tumor growth, Dr. Portnof will work with the patient following surgery to replace the teeth with dental implants when this is appropriate. This treatment can restore a normal smile and provides strong teeth for eating. Ask our **Atlantic Center** caregivers which type of treatment would be best for you and your family.