Craniofacial Distraction: An Issue of Clinics in Plastic Surgery: The Clinics

Craniofacial distraction is a surgical technique used to correct a variety of congenital and acquired deformities of the head and face. The procedure involves surgically dividing a bone and then gradually separating the two ends of the bone using a distraction device. This distraction creates new bone and soft tissue, which can be used to correct a variety of deformities.

Craniofacial Distraction, An Issue of Clinics in Plastic Surgery, E-Book (The Clinics: Surgery 48) by Sue Roberts

4.4 out of 5

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Screen Reader	: Supported
Enhanced typesetting	: Enabled
Print length	: 178 pages

History of Craniofacial Distraction

The concept of craniofacial distraction was first introduced in the early 1900s by Russian surgeon Gavriil Ilizarov. Ilizarov developed a technique called distraction osteogenesis, which involved using an external fixator to gradually separate the ends of a bone. This technique was initially used to treat limb deformities, but it was later adapted for use in craniofacial surgery.

In the 1950s, American surgeon Paul Tessier began using distraction osteogenesis to treat craniofacial deformities. Tessier developed a variety of distraction devices and techniques, and he is considered to be the father of modern craniofacial distraction.

Types of Distraction Devices

There are a variety of different distraction devices that can be used for craniofacial distraction. The most common type of distraction device is an external fixator. External fixators are attached to the bone using pins or screws, and they gradually separate the ends of the bone using a ratchet mechanism.

Internal distraction devices are another option for craniofacial distraction. Internal distraction devices are implanted into the bone, and they gradually separate the ends of the bone using a screw mechanism.

Clinical Applications of Craniofacial Distraction

Craniofacial distraction can be used to treat a variety of congenital and acquired deformities of the head and face. Some of the most common applications of craniofacial distraction include:

- **Craniosynostosis:** Craniosynostosis is a condition in which the sutures of the skull close prematurely, which can lead to a variety of deformities of the head and face. Craniofacial distraction can be used to open the sutures and correct the deformities.
- **Micrognathia:** Micrognathia is a condition in which the lower jaw is underdeveloped. Craniofacial distraction can be used to lengthen the lower jaw and improve the patient's bite and appearance.

- **Hemifacial microsomia:** Hemifacial microsomia is a condition in which one side of the face is underdeveloped. Craniofacial distraction can be used to improve the symmetry of the face and restore function to the affected side.
- **Trauma:** Craniofacial distraction can be used to repair fractures of the facial bones and to reconstruct the face after trauma.

Complications of Craniofacial Distraction

Craniofacial distraction is a complex procedure, and there are a number of potential complications that can occur. Some of the most common complications of craniofacial distraction include:

- **Infection:** Infection is a potential complication of any surgical procedure. Craniofacial distraction is particularly susceptible to infection because the distraction device is in contact with the bone and soft tissues.
- **Bleeding:** Bleeding is another potential complication of craniofacial distraction. Bleeding can occur during the surgery or during the distraction process.
- **Nerve damage:** Nerve damage can occur during the surgery or during the distraction process. Nerve damage can lead to numbness, tingling, or pain in the affected area.
- **Malunion:** Malunion occurs when the bone does not heal properly after the distraction process. Malunion can lead to deformity and functional problems.

Long-Term Outcomes of Craniofacial Distraction

The long-term outcomes of craniofacial distraction are generally good. Most patients are satisfied with the results of their surgery, and they experience significant improvements in their appearance and function. However, there is a risk of late complications, such as malunion or infection. Patients who undergo craniofacial distraction should be followed closely by their surgeon for many years after the surgery.

Craniofacial distraction is a powerful surgical technique that can be used to correct a variety of congenital and acquired deformities of the head and face. The procedure is complex, but the long-term outcomes are generally good. Patients who are considering craniofacial distraction should discuss the potential benefits and risks of the surgery with their surgeon.

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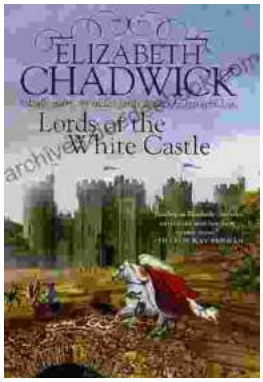

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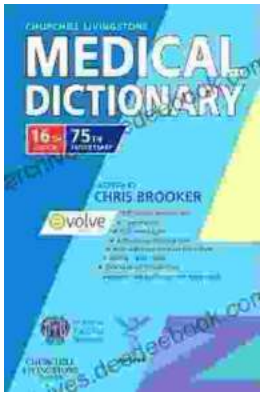

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