Sacroccocygeal Teratomas

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Pediatric Surgeons of Phoenix
"A teratoma is a true tumor or neoplasm composed of multiple tissues of kinds foreign to the parts in which it arises."

1962
Pathology

- Tumor - Benign or Malignant
- Contain elements derived from more than one embryonic germ layer
- Foreign to the anatomic site
- Cannot have resulted from metaplasia
- High degree of disorganization
Origin

Wandering Germ Cells Left Behind during the migration of embryonic germ cells from yolk sac to gonad
Regarding Malignancy

Benign

- Contain only recognizable adult mature tissues
  - i.e., epithelium, bone, cartilage, endothelium
Regarding Malignancy

**Immature**

- Contain “embryonic” tissues that are not frankly malignant, with or without mature tissues
Regarding Malignancy

Malignant Teratomas
Mature or Embryonic Tissue, also contain
Malignant tissues
Malignant Components

- Embryonal carcinoma
- Yolk Sac Tumors
  - endodermal sinus tumor
- Choriocarcinoma
- Germinomas
  - seminomas
  - dysgerminomas
- Mixture of Malignant Cells
Presentation

- Usually Obvious on Exam (75%)
- Dystocia
- Difficulty in delivery
  - Hemorrhage
  - Laceration of the Tumor
- Prenatal Diagnosis
  - Ultrasonography
Presentation

Presacral Tumors may present later

- Urinary Retention
- Rectal Obstruction
- Leg weakness (usually with malignancy)
Surgical Excision in All Cases

Sacral Incision

- Inverted -V Incision
- May Need Abdominal Incision if tumor extends considerably to the pelvis and retroperitoneum
- Malignant invasion may preclude complete excision in occasional patients

Treatment
Sacroccocygeal Teratomas
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Technical Aspects

- Blood Supply comes from the **Middle Sacral Artery**
- **Coccyx** should be removed with the tumor
- Reconstruction of the flap is important to avoid a flat shapeless bottom
After the Surgery

- Benign (majority of SCTs)
  - No Further Treatment Necessary
  - Perineal and Rectal Exams at 2, 4, and then 6 month intervals for at least 3 years
  - Any Recurrences should be promptly Excised
  - Rarely, a Malignant Recurrence may occur after a benign primary
Postoperative Therapy

- **Malignant Tumors**
  - Chemotherapy is recommended
  - Chemotherapy may deter recurrence
  - Recurrent malignant tumors are at risk for death from tumor progression
More problematic

Alpha-fetoprotein: predictive value

Recommendation:

Chemotherapy for patients with Immature Elements and elevated alpha-Fetoprotein or other markers.
Results