Premalignant Lesions of the Glottis

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Risk factors

- **Tobacco**
  - 13-fold increase in laryngeal cancer for smokers
  - Smokers of cigarettes with >22 mg of tar had double the incidence of laryngeal cancer compared with smokers of low-tar cigarettes

- **Alcohol**
  - Smokers consuming more than 1.5 L/day of wine had a 34-fold increased risk
  - Beer and hard liquor worse than wine
  - High risk is multiplicative
Other risk factors

- GERD
- Mate tea
- Occupational exposures
  - Asbestos
  - Nickel
  - Glass-Wool
Hoarseness

- Persistent for more than 4 weeks
- Mechanisms
  - affecting the vocal wave
  - restricting the direct opposition between the two vocal cords
Evaluation

- **Endoscopy**
  - Office endoscopy, stroboscopy
  - Intraoperative direct laryngoscopy
  - Ddx: fungal laryngitis, sarcoidosis, tuberculosis, or Wegener's granulomatosis

- **Biopsy**
  - Small suspicious lesions should be completely excised with a border of healthy laryngeal submucosa so the depth of invasion can be measured.
Spectrum of Laryngeal Squamous Abnormality

Hyperkeratosis
↓
Hyperkeratosis with atypia
↓
Carcinoma in situ (CIS)
↓
Superficially invasive carcinoma
↓
Invasive carcinoma
Histologic Criteria

- Cytomorphologic and maturation abnormalities
- Proliferation of immature or "uncommitted" cells
  - loss of cellular organization
  - nuclear pleomorphism
  - increase in nuclear size relative to the cytoplasm
  - increase in the nuclear chromatin with irregularity of distribution
  - increased mitoses
Severe Keratinizing Dysplasia

Risk of Progression

- Keratotic epithelium without dysplasia: 1-5%
- Mild dysplasia: 5.7%
- Moderate dysplasia: 22.5%
- Severe dysplasia: 28.4%
- CIS: 46%
Management

- Hyperkeratosis with atypia
  - Remove gross lesion microscopically
  - Follow-up and rebiopsy in 6-12 weeks
  - Severe dysplasia: panendoscopy
  - Behavioral modification

- Rapid or frequent recurrence with the same histology or progression to histologically proven invasive carcinoma
  - Cordectomy
  - Hemilaryngectomy
  - Full-course narrow-field radiation