OROPHARYNX CANCER

Employers Forum of Indiana
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Objectives

- Epidemiology of HPV+ oropharynx squamous cell carcinoma (OPSCC)
- Prognosis of oropharynx cancer
- Treatment options and outcomes
- HPV Vaccine
T2

>2-4 cm
Background

- Incidence of oropharynx cancer rising
  - Despite overall decline in head and neck cancer
  - Decreased smoking
  - Increased HPV+ disease
- HPV+ OPSCC > cervical cancer by 2020
▪ Double-stranded circular DNA virus
▪ Replicates exclusively in keratinocytes
▪ E6 and E7 viral oncogenes promoting cell growth by inactivation of p53 and pRb
▪ High risk subtypes 16 and 18
HPV+ OPSCC

- HPV-16 causes 90% of HPV+ cancer
- Gillison et al. showed 26 or more vaginal sex partners or 6 or more oral sex partners dramatically increases risk; OR = 3.1 and OR 3.4 respectively
- Differing phenotypic and biological profile of HPV+ OPSCC
  - Better DFS and OS compared to HPV- disease
Oncologic Outcomes

- Ang et al. Performed retrospective analysis of RTOG 0129
- Overall Survival of HPV (+) at 3 yrs: 82%
- Overall Survival of HPV (-) at 3 yrs: 57.1%
- Progression-free Survival in HPV (+): 73.7%
- Progression-free Survival in HPV (-): 43.4%
- Locoregional recurrence in HPV (+): 13.6%
- Locoregional recurrence in HPV (-): 35.1%
Risk Stratification

- Smoking factor
Treatment
Non-Surgical Treatment

- Standard chemoradiation therapy is once daily XRT in fractions of 2 Gy/fx for a total dose of 70-74 Gy (7 weeks)
- Concurrent Cisplatin
- Salvage Neck Dissections for PET+ lymph nodes 3 months s/p treatment or clinically concerning neck masses
Toxicity

- Loss of Taste
- Xerostomia
- Need for Feeding Tubes/Dysphagia
- Febrile Neutropenia
- Radiation Dermatitis
- Pain
Severe Late Toxicity After Concurrent Chemoradiation

- Machtay et al. reviewed RTOG Analysis of 3 trials
- 43% of assessable patients had a severe late toxicity
- 35% in patients with OPSCC
- Older age (odds ratio 1.05 per year; \( P = .001 \))
- Advanced T stage (odds ratio, 3.07; \( P = .0036 \))
- Larynx/hypopharynx primary site (odds ratio, 4.17; \( P = .0041 \))
- Neck dissection after CRT (odds ratio, 2.39; \( P = .018 \))
Traditional Surgery

Mandibulotomy

Pharyngotomy
Superior Oncologic Outcomes with Upfront Surgery

- Head & Neck 2004
- 16,188 cases from the National Cancer Data Base
- Early-stage disease, surgery with or without XRT had higher survival than irradiation alone
- Advanced-stage disease, surgery with irradiation had the highest survival
Five-year disease-specific survival by treatment for early-stage (I–II) base of tongue SCC
Five-year disease-specific survival by treatment for advanced-stage (III–IV) base of tongue SCC
Transoral Robotic Surgery

Increased Range of motion

Improved access and magnification
Early Stage Disease

- T1-2 No-1
- Generally good outcomes no matter the modality
- Goal: achieve optimum oncologic outcomes while minimizing acute and late toxicities
- Modern XRT techniques, severe late toxicity is decreasing
- Patient and tumor factors determine surgical vs. non-surgical approach
TORS Radical Tonsillectomy
TORS BOT Resection
Prevention
OB/Gyn > Cervical Cancer

FDA OKs HPV Vaccine for Adults Up to Age 45

— Previously approved for individuals ages 9 to 26 years

by Ian Ingram, Deputy Managing Editor, MedPage Today
October 07, 2018

WASHINGTON -- The FDA expanded the approval of Gardasil 9, the human papillomavirus (HPV) vaccine, to include men and women ages 27 to 45, the agency announced Friday.
Case

- 54 yo M presented with biopsy proven HPV+ SCC of right BOT
  - Clinically staged at T2 N2c Mo stage IVa
  - TB discussion
  - Concern for ECS on CT
  - Patient desired upfront surgery, TORS and bilateral neck dissections
Case
Case

- Final path
  - Negative margins
  - No adverse features
  - Contralateral neck negative
  - 3 positive ipsilateral nodes
  - No ECS

- Discharged POD#4
  - Soft diet without feeding tube
  - All drains removed
Conclusions

- HPV+ OPSCC patients are younger, healthier, nonsmokers
- Late toxicities from chemoXRT may be avoided or reduced with surgery
- HPV vaccination is for cancer prevention