Associazione Italiana Radioterapia e Oncologia clinica

Società Italiana di Radiobiologia

Is it time to spare postoperative irradiation of the flap in locally advanced oral cavity tumours treated with compartmental tongue surgery and reconstruction? Retrospective analysis of 183 patients

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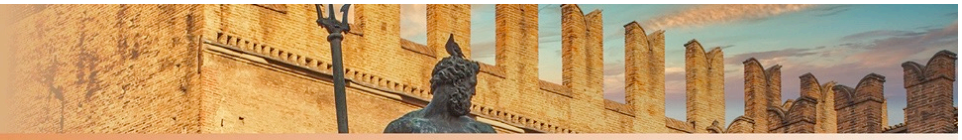


DICHIARAZIONE

Relatore: *Dott. Giovanni Carlo Mazzola*

Come da nuova regolamentazione della Commissione Nazionale per la Formazione Continua del Ministero della Salute, è richiesta la trasparenza delle fonti di finanziamento e dei rapporti con soggetti portatori di interessi commerciali in campo sanitario.

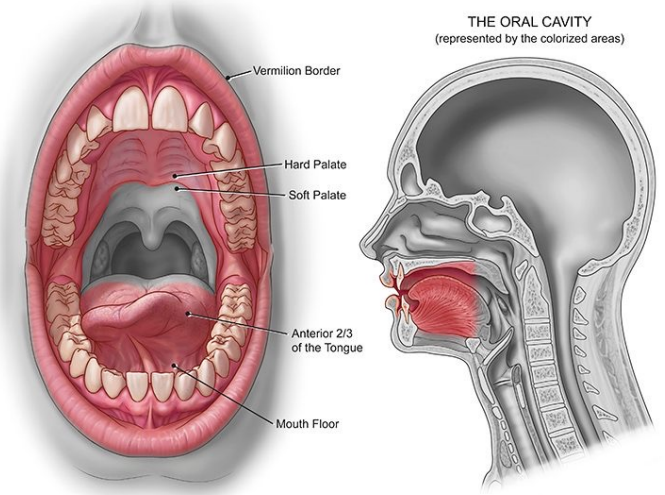
- Posizione di dipendente in aziende con interessi commerciali in campo sanitario **(NIENTE DA DICHIARARE)**
- Consulenza ad aziende con interessi commerciali in campo sanitario **(NIENTE DA DICHIARARE)**
- Fondi per la ricerca da aziende con interessi commerciali in campo sanitario **(NIENTE DA DICHIARARE)**
- Partecipazione ad Advisory Board **(NIENTE DA DICHIARARE)**
- Titolarità di brevetti in compartecipazione ad aziende con interessi commerciali in campo sanitario **(NIENTE DA DICHIARARE)**
- Partecipazioni azionarie in aziende con interessi commerciali in campo sanitario **(NIENTE DA DICHIARARE)**
- Altro

BACKGROUND

Oral cavity cancer

Increasing incidence of **oral tongue squamous cell carcinoma** in young white women age 18-44 years

Major risk factors:
- Tobacco
- Alcohol



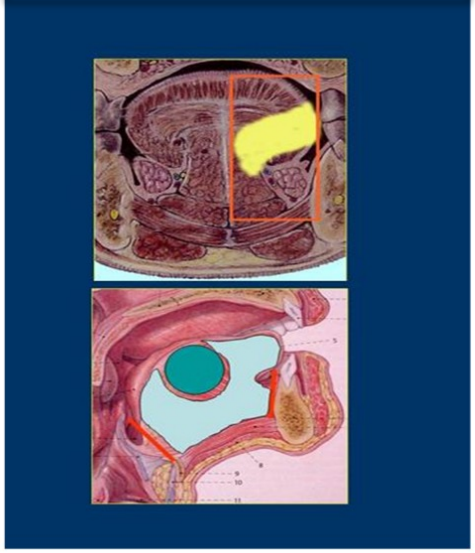
Advanced stage tumors suitable for surgery
(T3-T4a N0-N3)
- Surgery + RT +/- CT

BACKGROUND

WIDE RESECTION

- radical surgery
- resection margin 1-2 cm

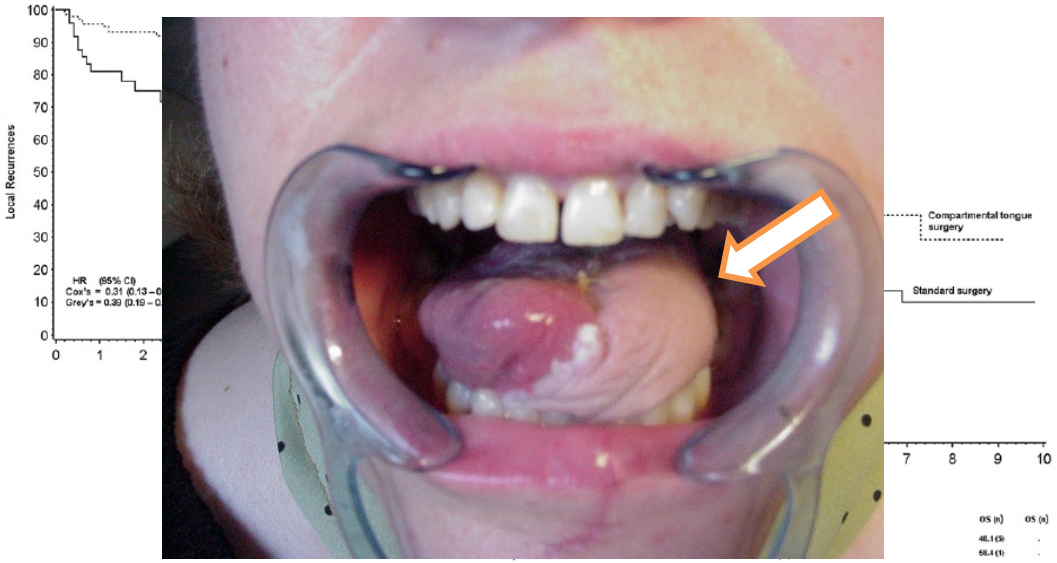
COMPARTMENTAL SURGERY

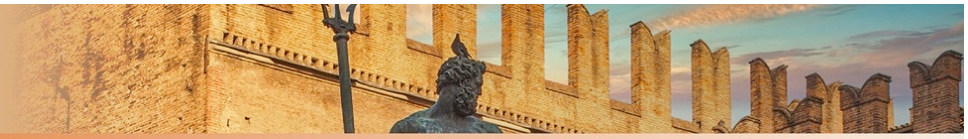


- planned resection (involved muscles)

Compartmental tongue surgery: Long term oncologic results in the treatment of tongue cancer

Luca Calabrese [1], Roberto Bruschini, Gioacchino Giugliano, Angelo Ostuni, Fausto Maffini, Maria Angela Massaro, Luigi Santoro, Valeria Navach, Lorenzo Preda, Daniela Alterio, Mohssen Ansarin, Fausto Chiesa





BACKGROUND

Surgical flap is routinely included in target volumes of postoperative radiotherapy (**PORT**) in patients treated with surgery for locally advanced tumor of the oral cavity

REVIEW Open Access

Technical guidelines for head and neck cancer IMRT on behalf of the Italian association of radiation oncology - head and neck working group

Anna Merlotti[1†], Daniela Alterio[2†], Riccardo Vigna-Taglianti[3†], Alessandro Muraglia[4†], Luciana Lastrucci[5†], Roberto Manzo[6†], Giuseppina Gambaro[7†], Orietta Caspiani[8†], Francesco Miccichè[9†], Francesco Deodato[10†], Stefano Pergolizzi[11†], Pierfrancesco Franco[12†], Renzo Corvò[13†], Elvio G Russi[3*†] and Giuseppe Sanguineti[14†]

Irradiation of the surgical flap could increase the acute radiation-related toxicity

Recommendations for postoperative radiotherapy in head & neck squamous cell carcinoma in the presence of flaps: A GORTEC internationally-reviewed HNCIG-endorsed consensus

Florent Carsuzaa [a], Michel Lapeyre [b], Vincent Gregoire [c], Philippe Maingon [d], Arnaud Beddok [e], Pierre-Yves Marcy [f], Julia Salleron [g,1], Alexandre Coutte [h], Severine Racadot [c], Yoann Pointreau [i], Pierre Graff [j], Beth Beadle [k], Karen Benezery [l], Julian Biau [b], Valentin Calugaru [e], Joel Castelli [m], Melvin Chua [n], Alessia Di Rito [o], Melanie Dore [p], Pirus Ghadjar [q], Florence Huguet [r], Pauline Jardel [s], Jorgen Johansen [t], Randall Kimple [u], Marco Krengli [v], Sarbani Laskar [w], Lachlan Mcdowell [x], Anthony Nichols [y], Silke tribius [z], Izaskun Valduvieco [aa], Chaosu Hu [ab], Xavier Liem [ac], Antoine Moya-Plana [ad], Ida D'onofrio [ae], Upendra Parvathaneni [af], Vinita Takiar [ag], Ester Orlandi [ah], Amanda Psyrri [ai], George Shenouda [aj], David Sher [ak], Conor Steuer [al], Xu Shan Sun [am], Yungan Tao [ad], David Thomson [an], Mu-Hung Tsai [ao], Noemie Vulquin [ap], Philippe Gorphe [ad], Hisham Mehanna [aq], Sue S. Yom [ar], Jean Bourhis [as], Juliette Thariat [at,*]

Can it be avoided? ⇨ ***Retrospective analysis!***

MATHERIALS AND METHODS

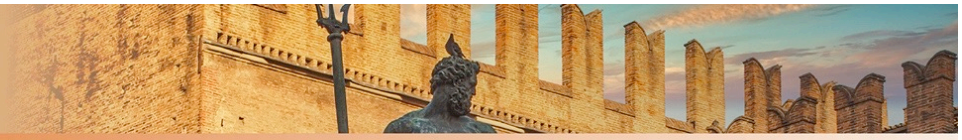
Data from patients treated with CTS and PORT at two Italian Institutions (*IEO* and *Azienda Sanitaria dell'Alto Adige*) have been retrospectively collected and analyzed

Inclusion criteria:

1) Locally advanced stage (III and IV, according 7th AJCC Edition)
2) CTS + PORT
3) Minimum follow-up of 6 months.

Aim:

- To assess whether the surgical flap represents a site of tumor local recurrence



MATHERIALS AND METHODS

All patients have been treated with intensity modulated radiotherapy (**IMRT**) up to a total dose ranging from **54 to 66 Gy**

The surgical flap was always included in the RT field at different dose levels according to tumor characteristics

Localization of **local recurrences** has been **identified** both **by radiologic images** (if available) and by the **revision** of medical charts performed **by an expert surgeon**

RESULTS

183 patients matched the inclusion criteria
Median age was 54 years
Median follow-up time of 74.1 months

28 Local Recurrence (15%)
Median fup-time of 9.4 months (IQR: 7.8 – 20.5)

	Patients with local recurrence	Patients without local recurrence	Total number of patients
	n=28	n=155	n=183
Gender			
Male	23	111	134
Female	5	42	47
Smoking habits			
No	5	48	53
Yes	23	107	130
<= 20 pack year	5	42	47
> 20 pack year	18	65	83
Glossectomy			
IIIA-B	11	84	95 (52%)
IVA-B	8	31	39 (21%)
V	1	7	8 (4%)
VI	8	33	41 (23%)

	Patients with local recurrence	Patients without local recurrence	Total number of patients
	n=28	n=155	n=183
Grade			
G1 / G2 / G3	11%/32%/57%	11%/44%/45%	11%/42%/47%
Histological DOI (mm)			
>10 / <=10	86%/14%	86%/14%	86%/14%
Margin			
Free/Positive/Close	82%/7%/11%	80%/9%/11%	80%/9%/11%
Margin Midline infiltration			
Yes	11%	4%	5%
T-N Tract			
Positive	21%	18%	19%
Vascular infiltration			
Yes	7%	7%	7%
Perineural infiltration			
Yes	14%	22%	21%
Intrinsic muscle infiltration			
Yes	89%	98%	97%
Extrinsic muscle infiltration			
Yes	82%	88%	87%
ECE			
Yes	46%	35%	37%
Stage			
pT1-2	2	16	18
pT3-4	26	139	165
pN0-1	8	81	89
pN2	20	72	92
pN3	0	1	1
III	1	4	5
IVa	27	151	178

RESULTS

28 Local Recurrence

17 at radiologic images

<u>None of the local recurrences was localized within the surgical flap</u>

11 at clinical charts revision

CONCLUSIONS

- In the analyzed cohort, none of the primary tumor recurrences occurred within the surgical flap
- This finding could suggest that flap does not represent an area at high risk of relapse
- Further investigations are required to assess if it would be safe to avoid flap irradiation after a compartmental surgical approach
- An accurate mapping of recurrences location and absorbed dose to the surgical flap is currently ongoing

Grazie per l'attenzione!!