

HEALTHCARE-ASSOCIATED INFECTIONS (HAIs) IN HEAD AND NECK CARCINOMA PATIENTS: MONOINSTITUTIONAL ANALYSIS 2005-2009

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On behalf of the multidisciplinary head and neck group.

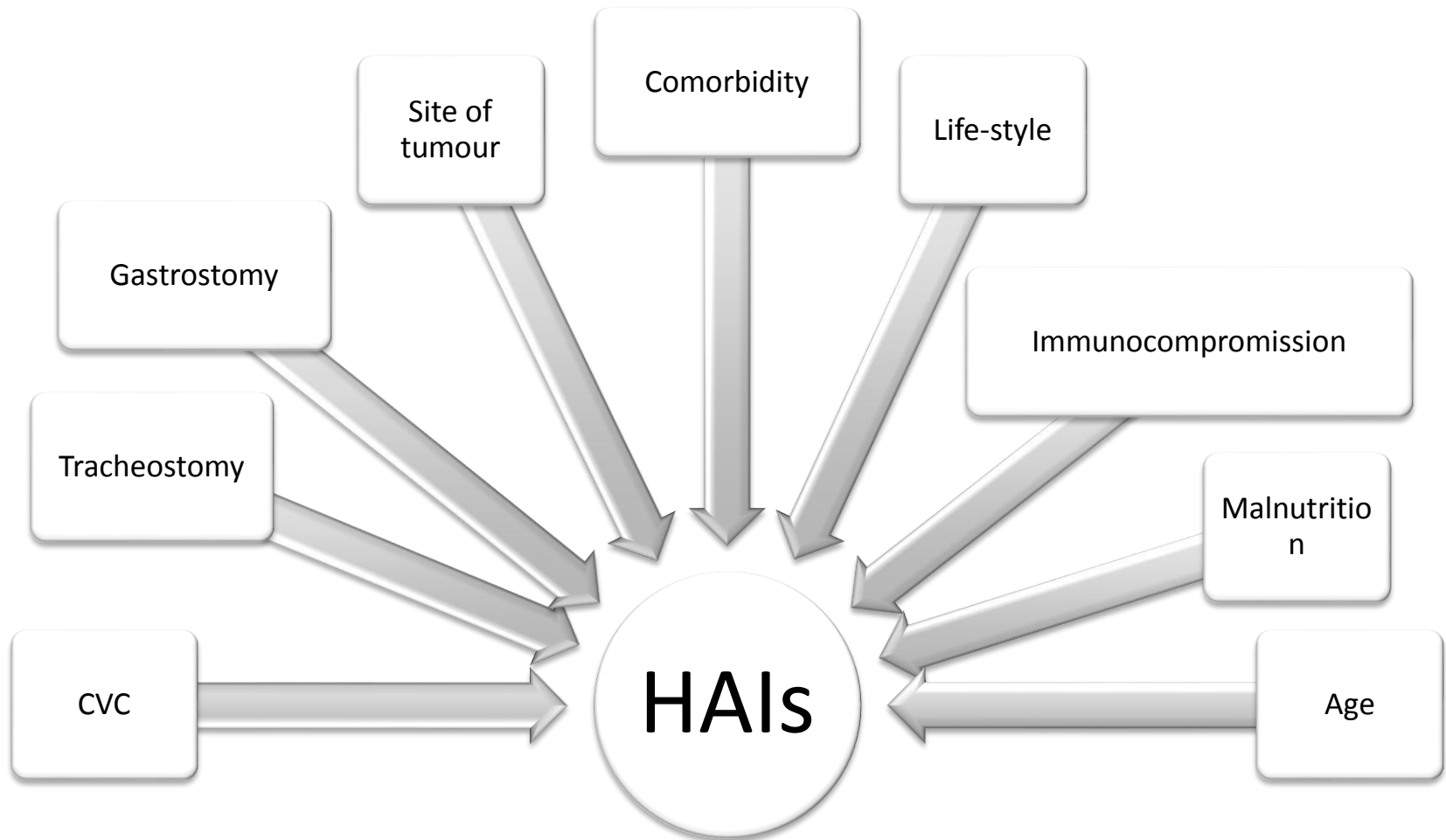
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I HAVE NO CONFLICTS OF INTEREST TO DECLARE

HNC patients and infections



AIMS

- To detect HAIs incidence in HNC treated with chemotherapy and/or RT
- To study antibiotics susceptibility and resistant pathogens
- To hypothesize disease/treatment specific antibiotics' protocols in HNC pts
- To study HAIs incidence with other treatment procedures and/or type of cancer

Patients admitted with a suspected infection were studied microbiologically.

Out of 2288 hospital admissions of pts with HNC from 2005 to 2009:

- ✧ 1197 suspect of HAIs that requested cultures**
- ✧ 821/1197 negative cultures**
- ✧ 140 colonizing HAIs in 71 pts**
- ✧ 25 pts had concomitant HAIs (range 2 – 4)**
- ✧ 33 pts had more than 1 HAI within the allocated treatment program (range 2 – 7)**

PATIENTS' CHARACTERISTICS

NUMBER of HAIs 140 (100%)

Stage I-II

2%

Stage III-IV

56%

LR recurrence

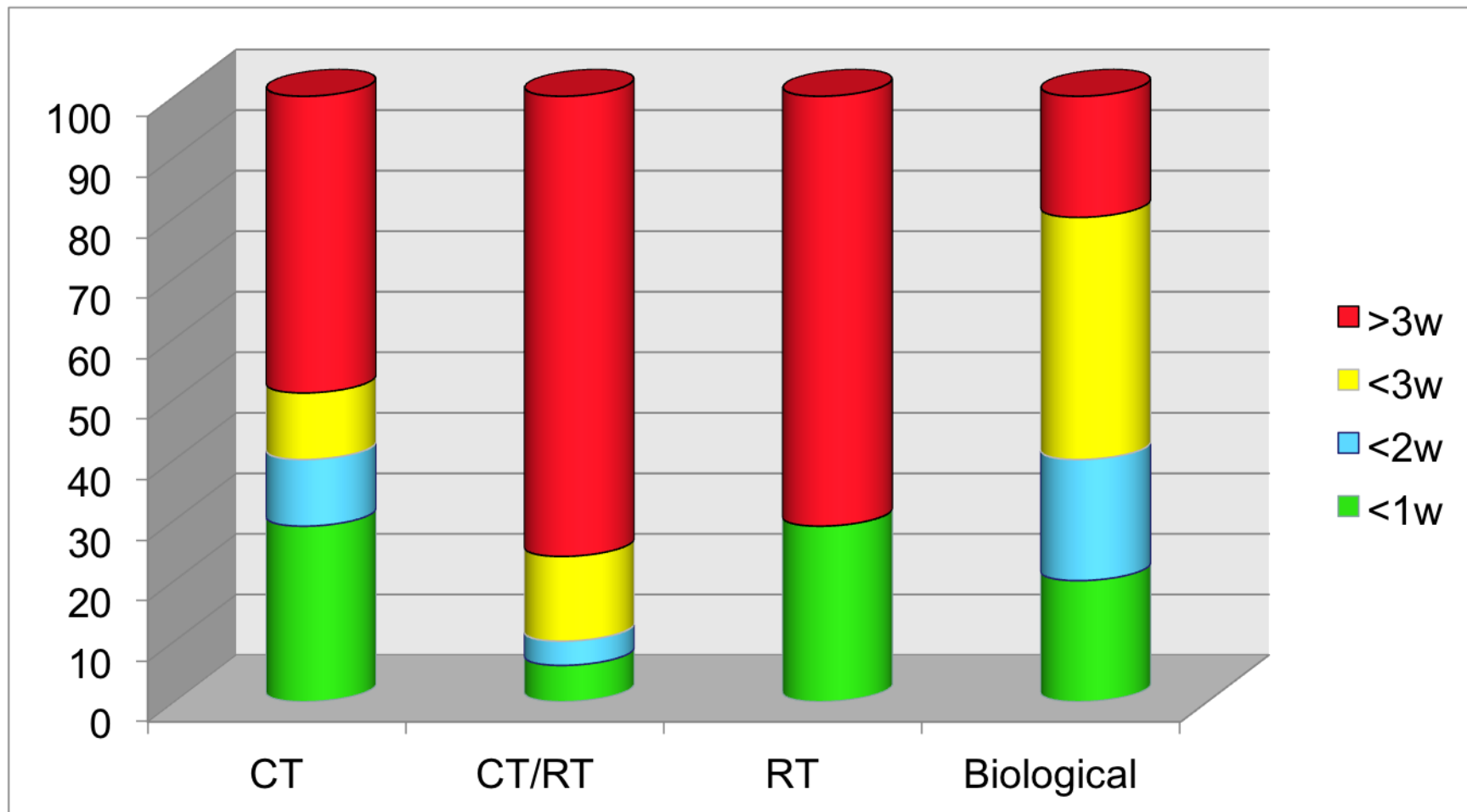
28%

Metastases ±LR

14%

PATIENTS' TREATMENT	NUMBER of HAIs 140 (100%)
CT	32%
Biological therapy alone	4%
CT/RT	60%
RT alone	4%

TIMING of INFECTIONS



PATIENTS' DEVICES

NUMBER of HAIs 140 (100%)

CVC

74%

Gastrostomy

47%

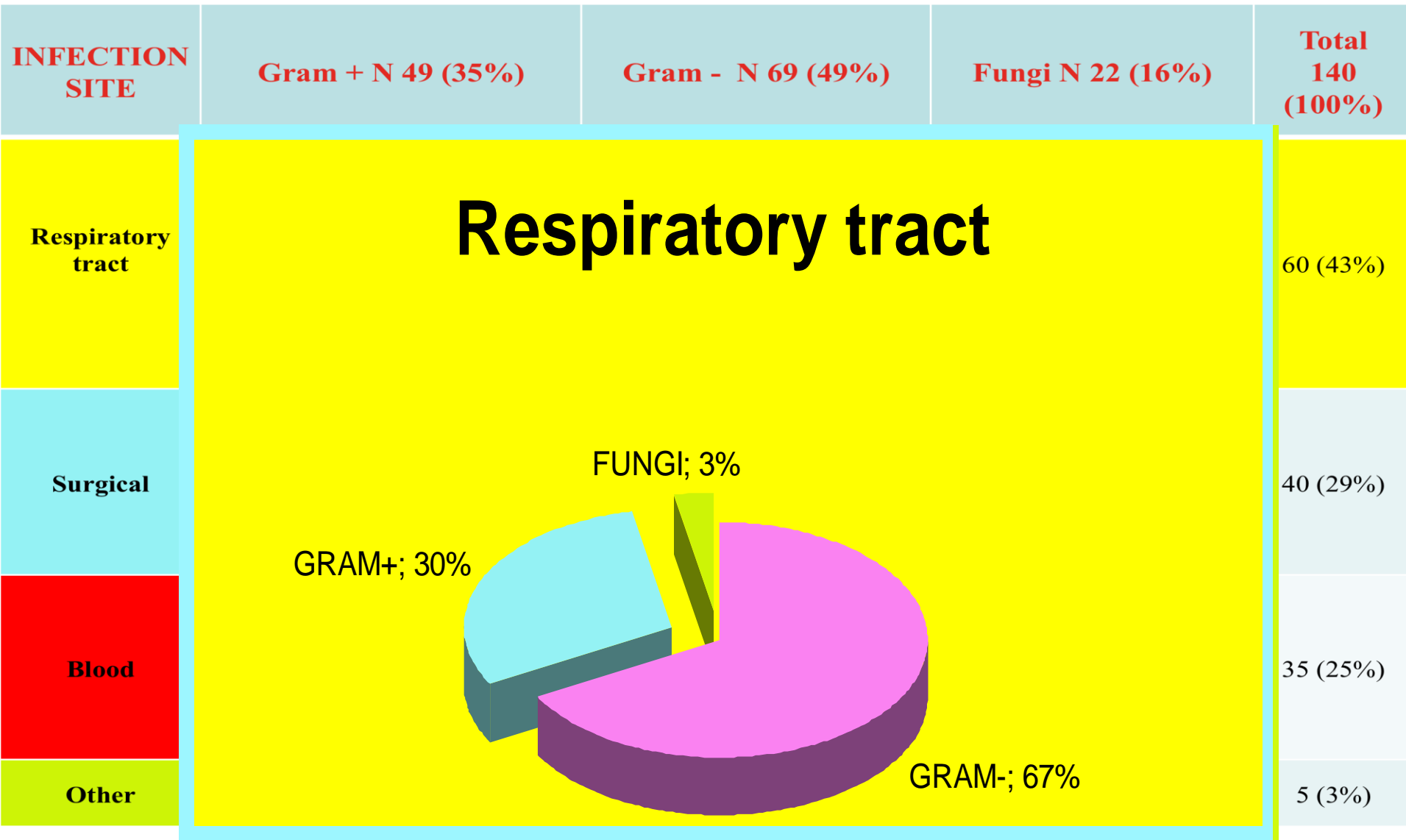
Tracheostomy

16%

INFECTIONS' SIGNS	NUMBER of HAIs 140 (100%)
Apyrexia	61%
No Neutrophil Leukocytosis	77%
Normal PCRq level	27%
No Clinical Symptoms	29%

36% of microbiologically confirmed pneumonia had negative Chest X-Ray

RESULTS



37 ANTIBIOTICS TESTED

Sensibilità agli antibiotici dei ceppi più frequentemente isolati

Criteri di selezione: Pazienti - ricoverati nel reparto di OMLE

Tutti i campioni 2005-2009

Gram negativi % Sensibilità

2005-2009	P. aeruginosa		E. coli		S. marcescens	
	N	%	N	%	N	%
Amikacina	23	83%	3	100%	5	100%
Aztreonam	20	75%				
Amoxicillina/Clavulanico			3	67%	3	0%
Ampicillina			6	33%	4	0%
Cefazolina			5	80%	4	0%
Cefepima	24	83%	6	67%	6	100%
Cefixima			3	33%		
Cefotaxima			6	67%	4	100%
Ceftazidima	24	79%	6	67%	6	100%
Cefuroxime			4	25%		
Ciprofloxacina	24	83%	5	40%	4	100%
Cotrimoxazolo	23	0%	6	83%	6	100%
Gentamicina	23	91%	6	100%	6	100%
Imipenem	24	83%	5	100%	6	100%
Levofloxacina			5	60%	4	100%
Meropenem	24	88%	6	100%	6	100%
Nitrofurantoina			3	67%	3	0%
Norfloxacina			6	50%	4	100%
Piperacillina	24	88%	6	50%	6	100%
Piperacillina/Tazobactam	24	88%	6	100%	6	100%
Ticarcillina	20	85%				
Ticarcillina/Clavulan	20	85%				
Tetraciclina			3	100%		
Tigeciclina			2	100%	3	100%
Tobramicina	22	86%	4	100%	3	100%

Gram positivi % Sensibilità

2005-2009	S. aureus		SCN	
	N	%	N	%
Ciprofloxacina	11	55%	15	40%
Clindamicina	24	68%	19	53%
Cotrimoxazolo	24	92%	19	68%
Daptomicina	3	100%	1	100%
Eritromicina	25	52%	19	37%
Gentamicina	24	75%	19	80%
Levofloxacina	20	55%	18	44%
Linezolid	19	100%	17	100%
Moxifloxacina	19	79%	17	76%
Nitrofurantoina	23	100%	19	95%
Norfloxacina	16	56%	17	35%
Oxacillina	24	58%	19	32%
Penicillina	23	4%	19	16%
Quinupristina/Dalfopristina	11	100%	14	100%
Rifampicina	24	100%	19	89%
Teicoplanina	24	100%	19	95%
Tetraciclina	24	100%	19	63%
Tigeciclina	8	100%	3	100%
Tobramicina	24	75%	19	85%
Vancomicina	24	100%	19	95%

HAIs in other departments 2005-2009

Departments	Gram+	Gram-	Fungi	Respiratory tract	Sepsis	Urinary tract
HN Surgery	43%	39%	18%	17%	31%	1%
M e d i c a l Oncology	38%	42%	20%	13%	11%	39%
Haematoncology	52%	32%	15%	12%	61%	2%
HN Medical Oncology	35%	49%	16%	43%	26%	0%

COMMENTS

- **80% *P. aeruginosa* and 100% of Enterobacteriaceae sensible to meropenem and piperacillin/tazobactam.**
- **42% of *S. aurei* were MRSA (all responsive to daptomycin, linezolid, rifampicin, tetracycline, teicoplanin, vancomycin).**

CONCLUSIONS

- **Specific HAIs in this population**
- **MRSA are emerging infections**
- **Individualised antibiotic protocols are needed**
- **Sign of infection might be absent in presence of HAI**