

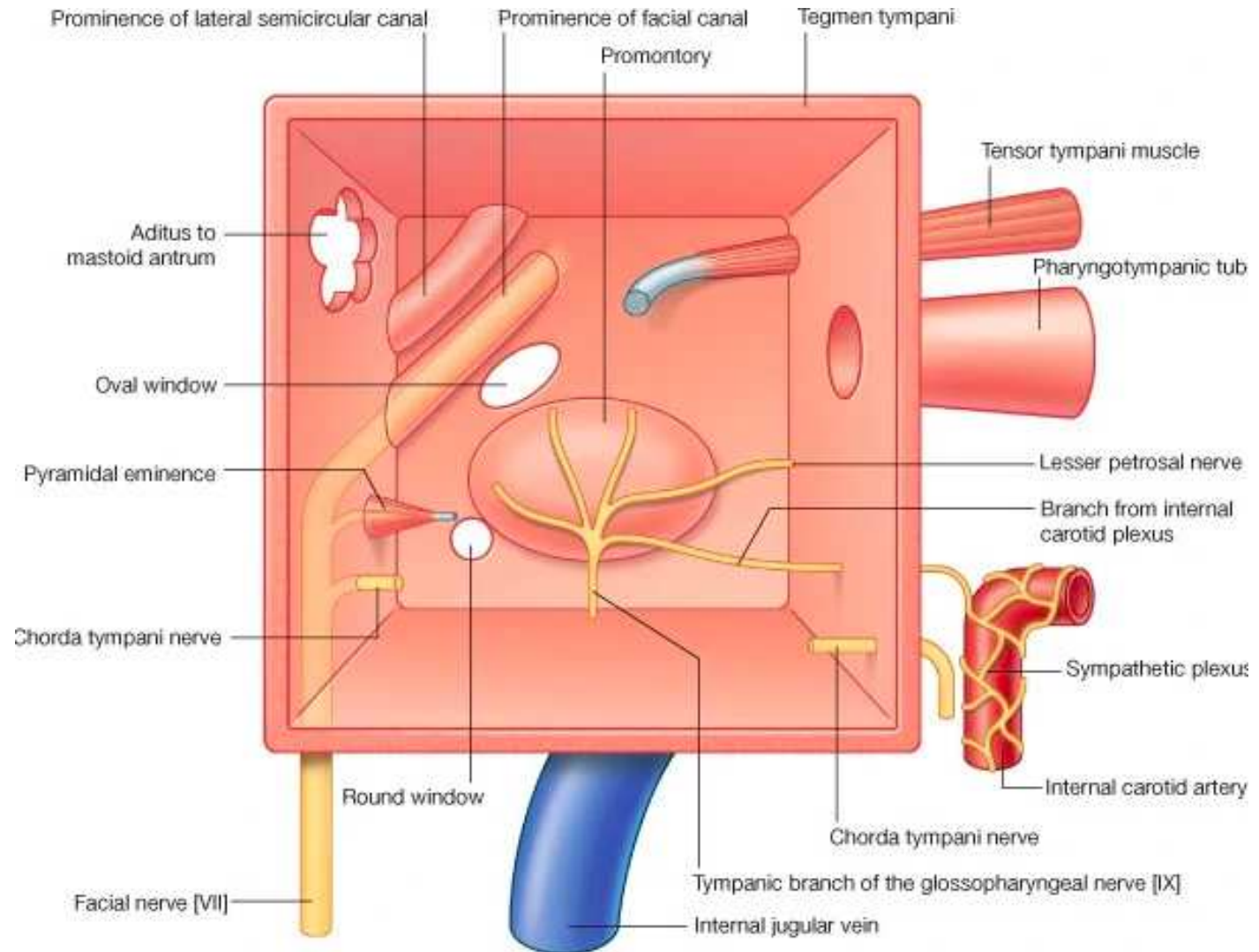


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# RCBG\_21096

## Le otiti e il pediatra: "practise essentials"

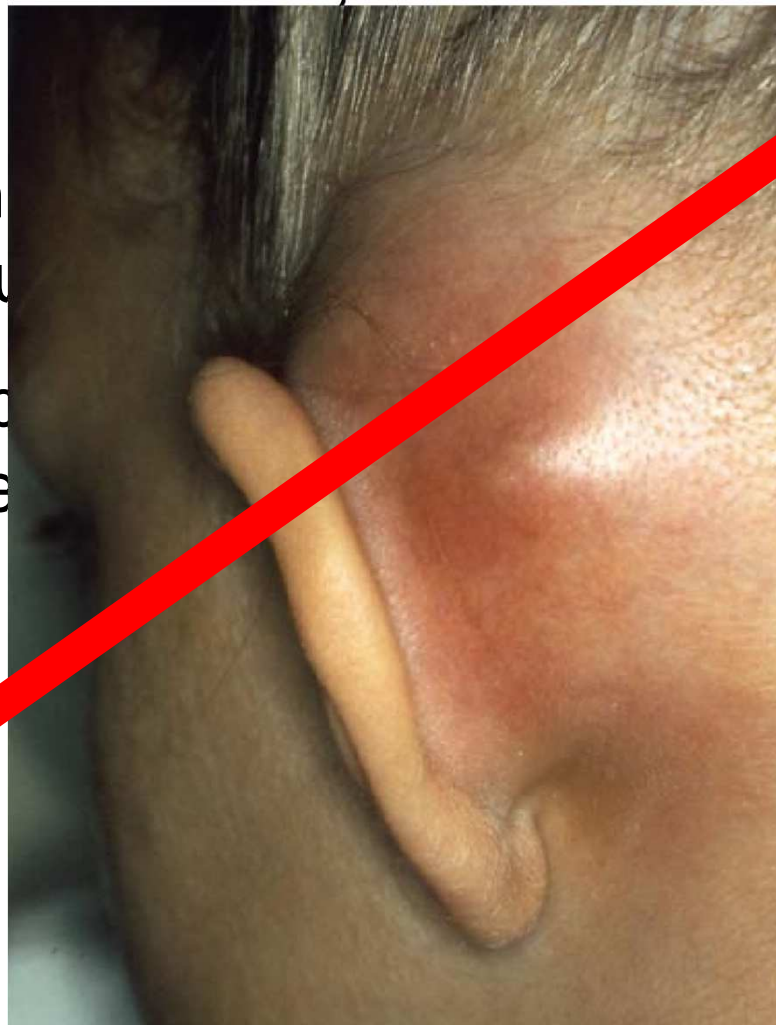
Poropat Federico  
Pediatría d'Urgenza e Pronto Soccorso  
IRCCS Burlo Garofolo



## Nicole, 2 anni

OMA sin  
7 giorni u  
3 giorni p  
e della fe

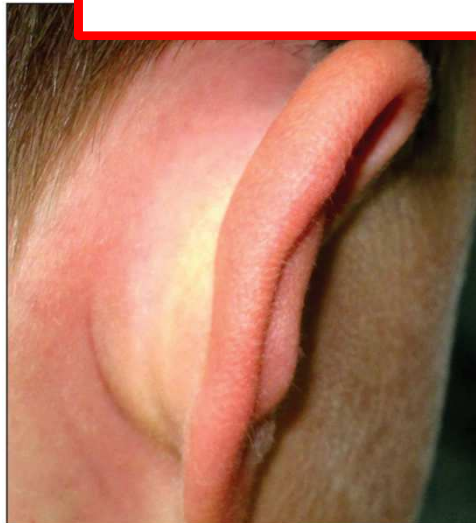
Viene in  
e...



lina per



È una cellulite da otite estereana  
o  
una mastoidite?



6 anni

Da una settimana otalgia

Febbricola

In amoxicillina da 3 giorni

Otorrea da 2 giorni



3 anni

Febbricola

Dolore retroauricolare



8 anni

Febbre elevata

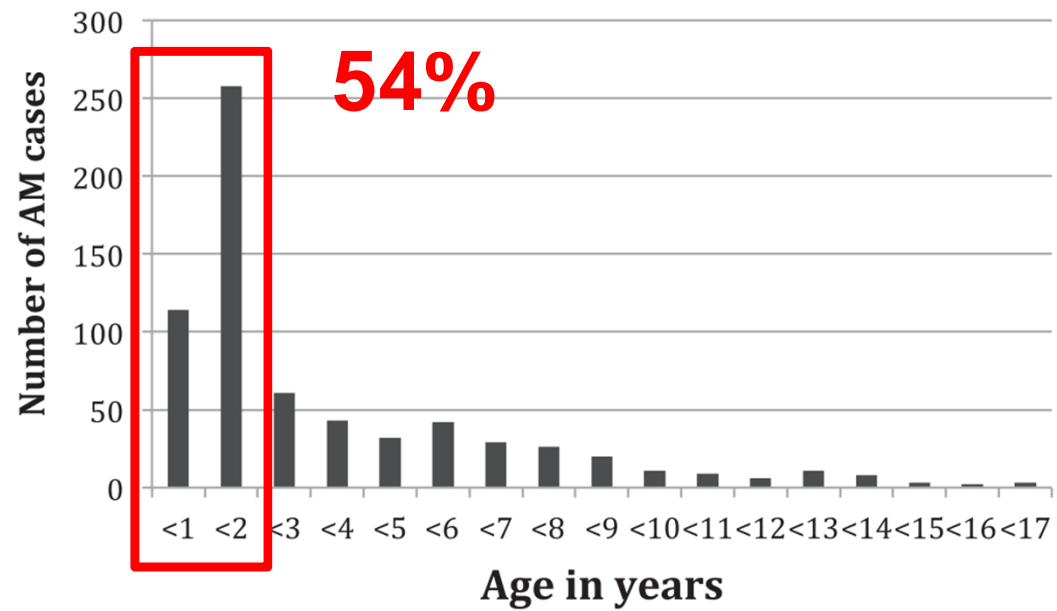
Dolore alla pinna

### Differential Diagnosis of the Inflamed Mastoid Process\*

	OE	Mastoiditis
Erythema of mastoid process	+	+++
Protuberant pinna	+	+++
Loss of postauricular skinfold	+	+++
External canal swelling	+++	+
Otitis media	-	+++
Pinna tender to traction	+++	+
Tragus tender to pressure	+++	+
Fluctuance over mastoid process	-	x++
Pain with chewing	+++	+
Frequent swimming	+++	-
Immunodeficiency or diabetes	-	+
Fever	-	++
Ill appearance	-	x++
Cranial nerve involvement	-	+
Elevated white blood cell count	-	++

	mean %	range
<b>fever (n=46)</b>	<b>76</b>	29 - 100
lethargy / malaise (n=10)	96	38 - 100
headache (n=5)	31	5 - 50
upper respiratory tract infection (n=4)	43	23 - 60
rhinorrhea (n=2)	43	33 - 52
lymphadenopathy (n=4)	37	17 - 54
poor feeding (n=9)	62	18 - 100
vomiting (n=5)	30	14 - 51
<b>AOM (n=5)</b>	<b>80</b>	48 - 100
otalgia (n=19)	67	19 - 100
otorrhea (n=39)	53	5 - 100
postauricular swelling +/- fluctuation (n=48)	85	16 - 100
postauricular erythema (n=35)	83	11 - 100
postauricular tenderness (n=23)	81	33 - 100
protrusion of pinna (n=26)	79	10 - 100
<b>sagging/edema external ear canal (n=11)</b>	<b>71</b>	3 - 100



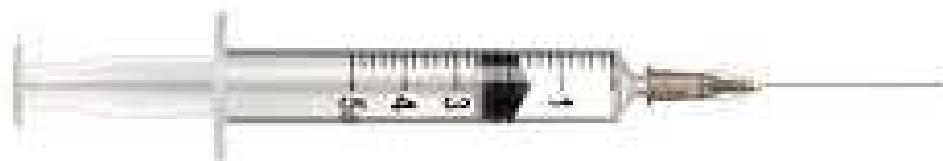


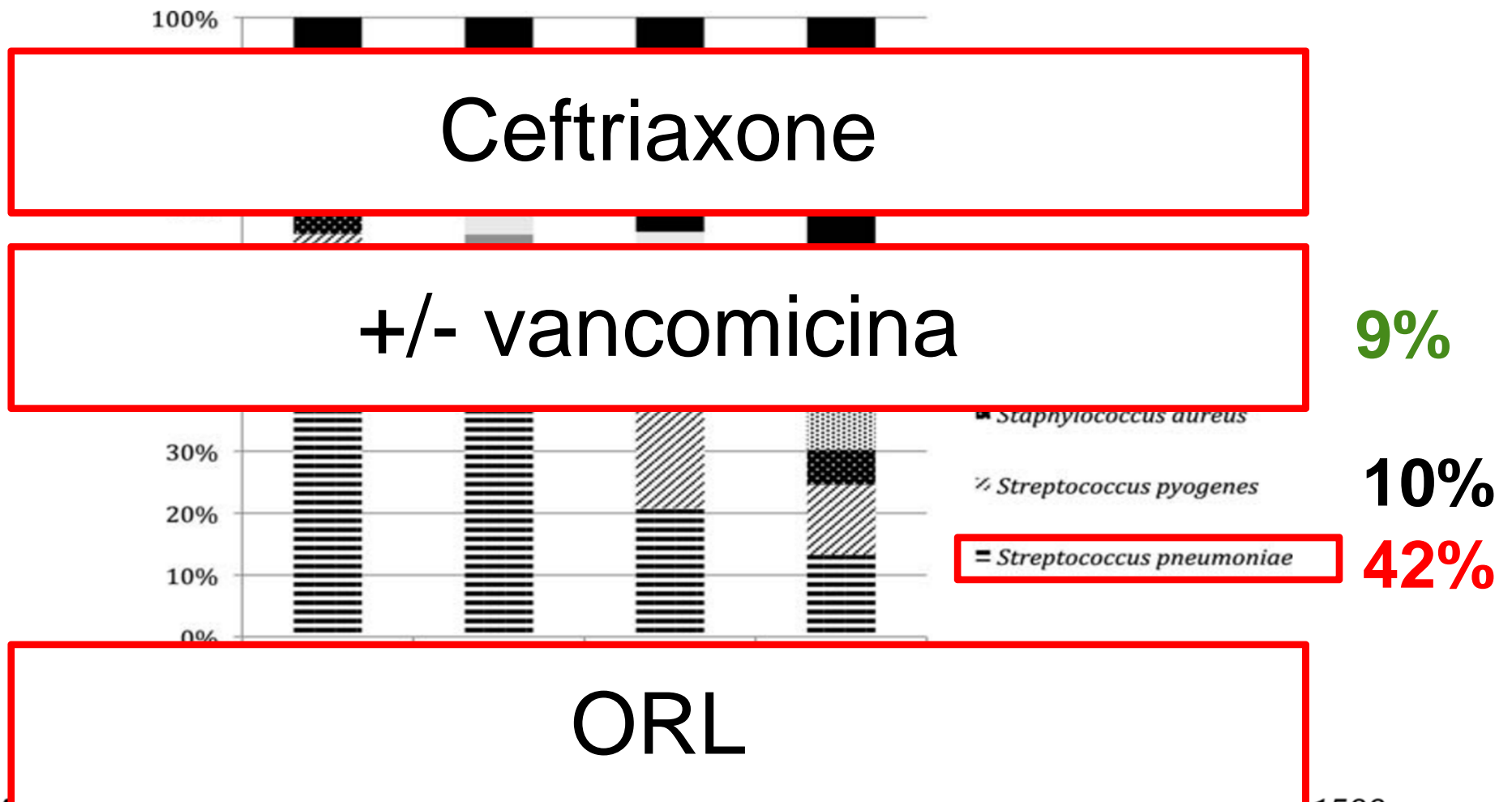
A. Groth et al./International Journal of Pediatric Otorhinolaryngology 76 (2012) 1494–1500



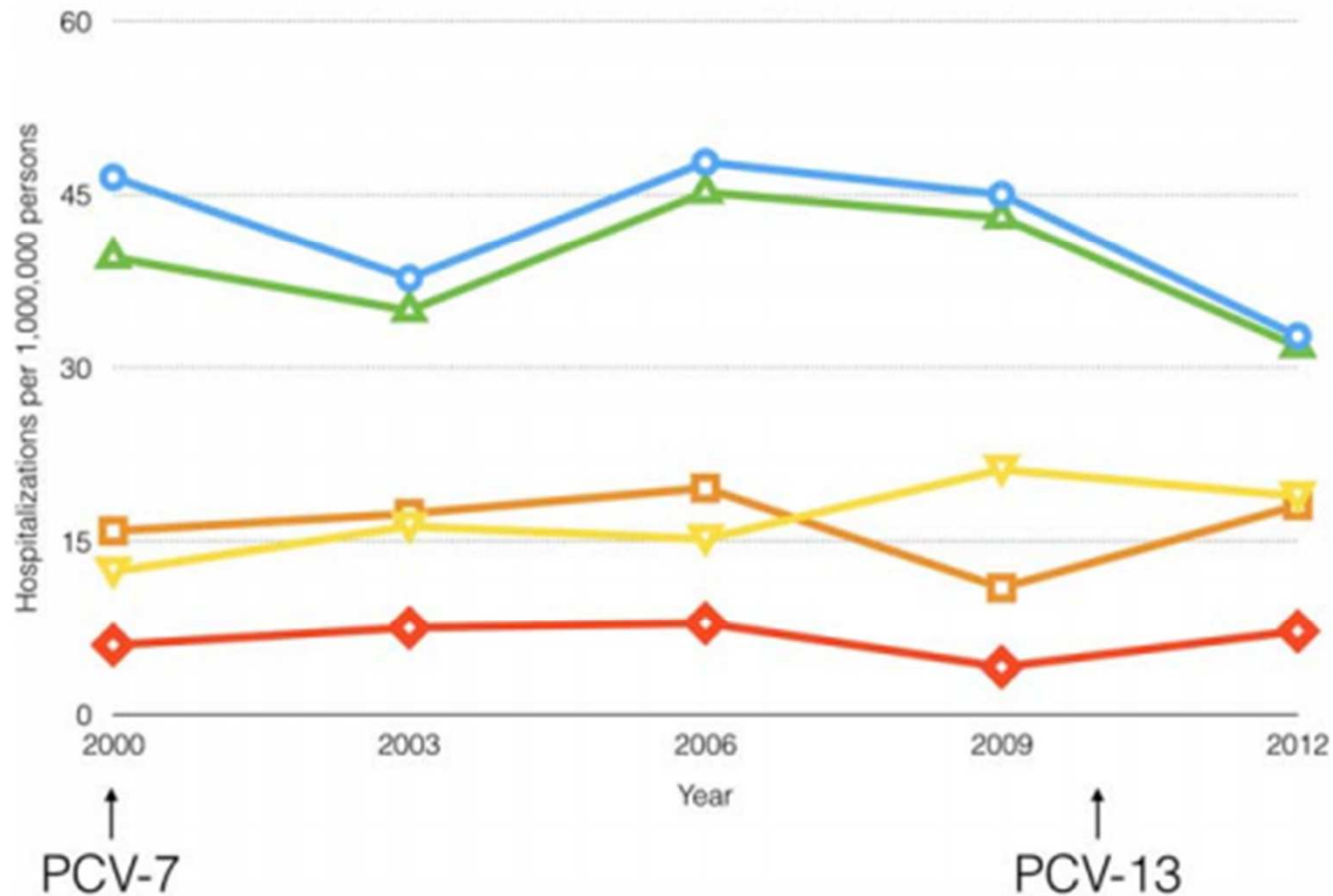


	0-11 months N=114 (17)	12-23 months N=258 (38)	2-7 years N=233 (34)	8-16 years N=73 (11)	p-Value	Total 0-16 years N=678
<i>Laboratory findings</i>						
<b>CRP initial value (N=542)</b>						
Mean	93.4	103.7	76.5	64.0	0.003	87.8
Median	82.0	93.0	53.5	39.5	<0.001	70.0
SD (SE)	58.6 (6.4)	72.5 (5.1)	69.4 (5.0)	59.7 (7.4)		69.4 (3.0)
<b>WBC (N=492)</b>						
Mean	16.6	16.5	14.0	10.7	<0.001	14.9
Median	16.4	15.6	13.9	10.9	<0.001	14.2
SD (SE)	5.3 (0.7)	8.3 (0.6)	4.8 (0.4)	3.4 (0.4)		6.6 (0.3)





# ..e il vaccino?





non tanto per la diagnosi...



...ma per le complicanze della mastoidite...

TABLE III.  
 Signs and Symptoms at Presentation.

	Patients Without ICCs (N = 61)	Patients With ICCs (N = 10)	P Value*
Protrusion of auricle, no. (%)	59 (97)	9 (90)	.37
Postauricular swelling, no. (%)	59 (97)	10 (100)	1.00
Postauricular erythema	58 (95)	10 (100)	1.00
Postauricular fluctuation (subperiosteal abscess), no. (%)	2 (3)	5 (50)	.0004
Tympanic membrane erythema, no. (%)	46 (75)	6 (60)	.44
Tympanic membrane bulging, no. (%)	45 (74)	6 (60)	.45
Otorrhea, no. (%)	8 (13)	4 (40)	.048
Fever, no. (%)	35 (57)	4 (40)	.33
Neurological signs	0	0	

\*Fisher exact test.  
 ICC = intracranial complication.



Analysis of acute mastoiditis complications.

		Complications		P
		Yes (n = 30)	No (n = 105)	
Age ≤ 24 months	Yes	19	38	**
	No			
Previous otolaryngology diseases (recurrent AOM, adenoidal hypertrophy, sinusitis and/or previous episodes of AM)	Yes	<b>33%</b>	<b>22%</b>	+
	No			
Antibiotics for AOM < 3months prior to admission	Yes	17	54	+
	No	13	51	
Antibiotics at admission	Yes	16	52	+
	No	14	53	
Leukocyte count	Mean ( $\times 10^9/\mu\text{L}$ )	16.7 ± 6.1	14.5 ± 5.1	*
C-Reactive Protein (CPR)	Mean (mg/dL)	13 ± 10.9	6.3 ± 6	**
Surgery	Yes	17	14	**
	No	12	92	
Recurrences	Yes	1	8	+
	No	29	96	

Legend: AOM: acute otitis media; AM: acute mastoiditis; +p > 0,05; \*0,05 ≤ p ≤ 0,01; \*\*0,01 ≤ p ≤ 0,001.

# Acute mastoiditis — The role of radiology

D.P. Minks<sup>a,\*</sup>, M. Porte<sup>b</sup>, N. Jenkins<sup>b</sup>

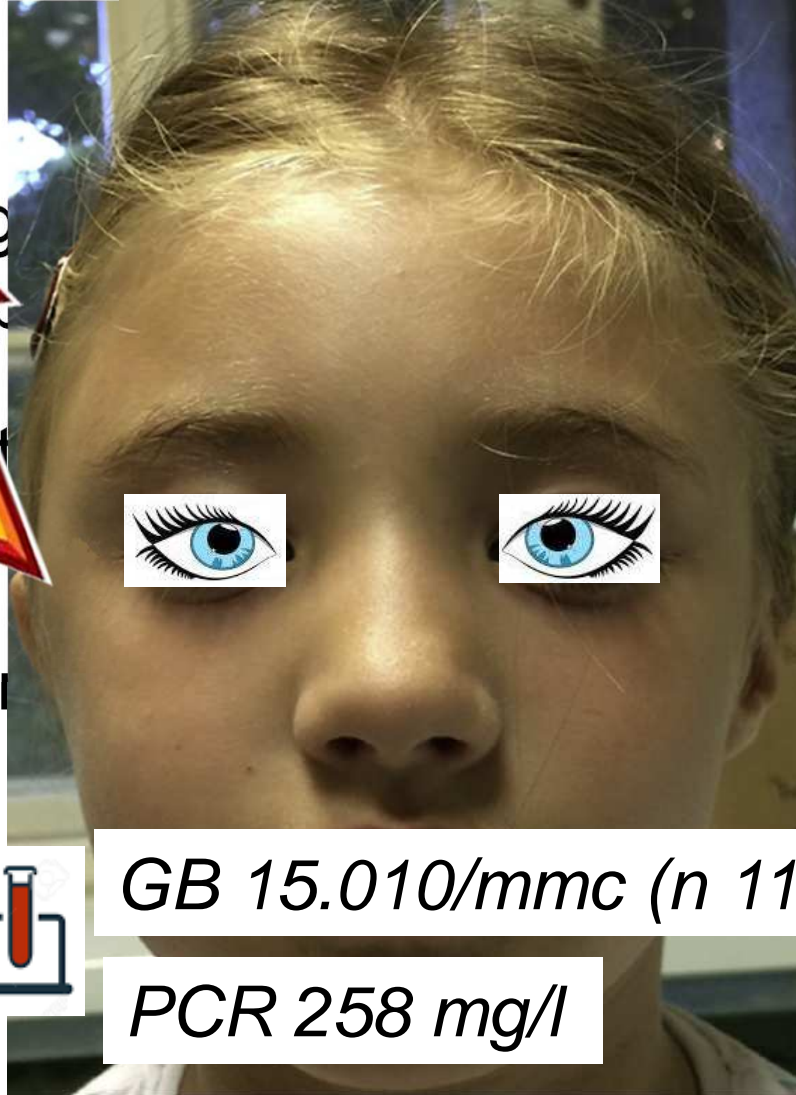
Acute mastoiditis occurs commonly. The intracranial complications can be clinically silent and insidious in onset. Early imaging is essential in investigating patients with potential intracranial complications and close liaison with the referring clinical team is necessary.

MRI enhanced with gadolinium, including MR venography, is the ideal as it demonstrates the subtle intracranial abnormalities that may not be visible at CT. The absence of ionizing

**..se mancato miglioramento in 48 ore..**

assessment and remains the workhorse for on-call imaging.





difficoltà

o orale

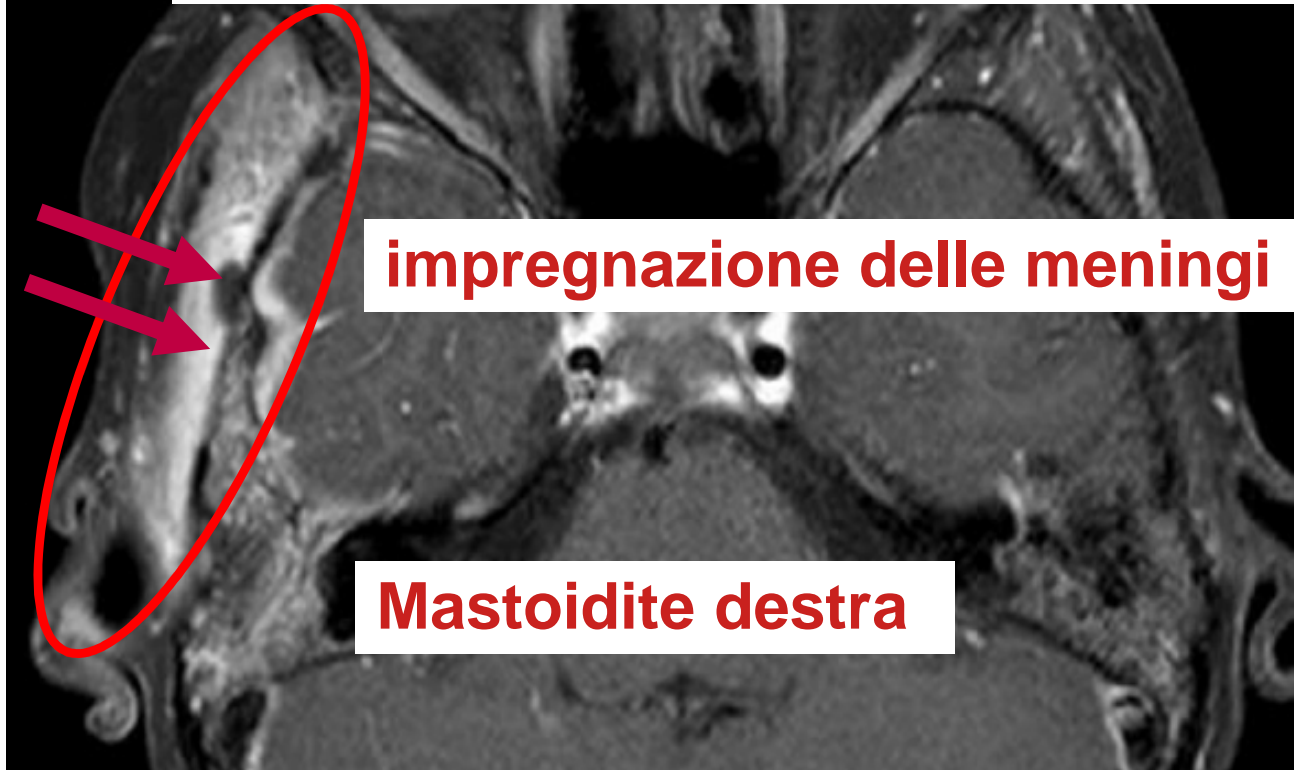
na



*GB 15.010/mmc (n 11.000/mmc)*

*PCR 258 mg/l*

## Edema spongiosa del temporale



Cefotaxime + clindamicina

## Luca, 10 anni

Diplopia intermittente

Cefalea frontale

Tinniti



20 giorni prima episodio di otite febbrile  
trattata con amoxicillina

**Fundus oculi con papilledema**



Emocromo, ves e PCR negativi

## Trombosi venosa profonda dei seni

Ceftriaxone + vancomicina +/- metronidazolo

miringotomia/mastoidectomia

Eparina a basso peso molecolare [4-6 mesi]



**TABLE 1 Presenting Symptoms for Each Patient**

Symptoms	1	2	3	4	5	6	7	8	9	10	11	12	13	Total No.
<b>Neurologic</b>														
Diplopia	X	X	X	X	X	X	X	X						7
Facial asymmetry								X						1
<b>Otomastoid</b>														
Otalgia	X									X		X	X	4
Otorrhea	X	X								X	X		X	5
Postauricular pain									X	X		X	X	4
<b>Other</b>														
Fever		X			X	X		X	X	X	X		X	8
Headache	X	X	X	X	X	X	X	X	X		X			10
Nausea/vomiting			X		X				X	X				4
Photophobia	X						X							2
Neck stiffness	X				X				X	X				4
Dizziness			X				X							2
Gait instability									X	X				2

**53%**

**77%**



	Pt 1	Pt 2	Pt 3	Pt 4	Pt 5	Pt 6	Pt 7	Tot	
Gender	M	M	M	M	M	F	F	M:F 5:2	
Age (years)	range 3-13	3	6	13	8	3	4	7	median 6
Neurologic Features	Headache	x	x	x	x				4 (57%)
	Diplopia				x		x		2 (28%)
	Lethargy	x				x	x		3 (42%)
	Papilledema	x	x		x			x	4 (57%)
	Dizziness						x		1 (14%)
Non-neurologic Symptoms	Gait instability					x			1 (14%)
	Fever	x	x	x	x	x	x	x	7 (100%)
	Otalgia	x	x	x			x	x	5 (71%)
	Otorrhea	x		x	x			x	4 (57%)
	Mastoiditis								0
	Nausea/vomiting	x			x			x	3 (42%)
	Neck stiffness		x						1 (14%)
Laboratory data	WBC count (cell/mm <sup>3</sup> )	11,840	10,440	10,590	19,800	8,700	15,820	33,330	11,840
	Neutrophil count (cell/mm <sup>3</sup> )	9,117	6,922	7,858	18,414	6,125	9,919	31,463	9,117
	CRP (mg/dL)	7.14	31	6.91	2	2.27	17	31.53	7.14
	PCR assay mastoid aspirate	<i>St.pyogenes</i>	<i>H.influenzae</i>	<i>H.influenzae</i>	NP	NP	NP	NP	
	Thrombophilic Screening	N	N	NP	N	N	N	N	

## Jasmine, 17 mesi

Febbre elevata, soporosa, deviazione dello sguardo e rigor

midazolam

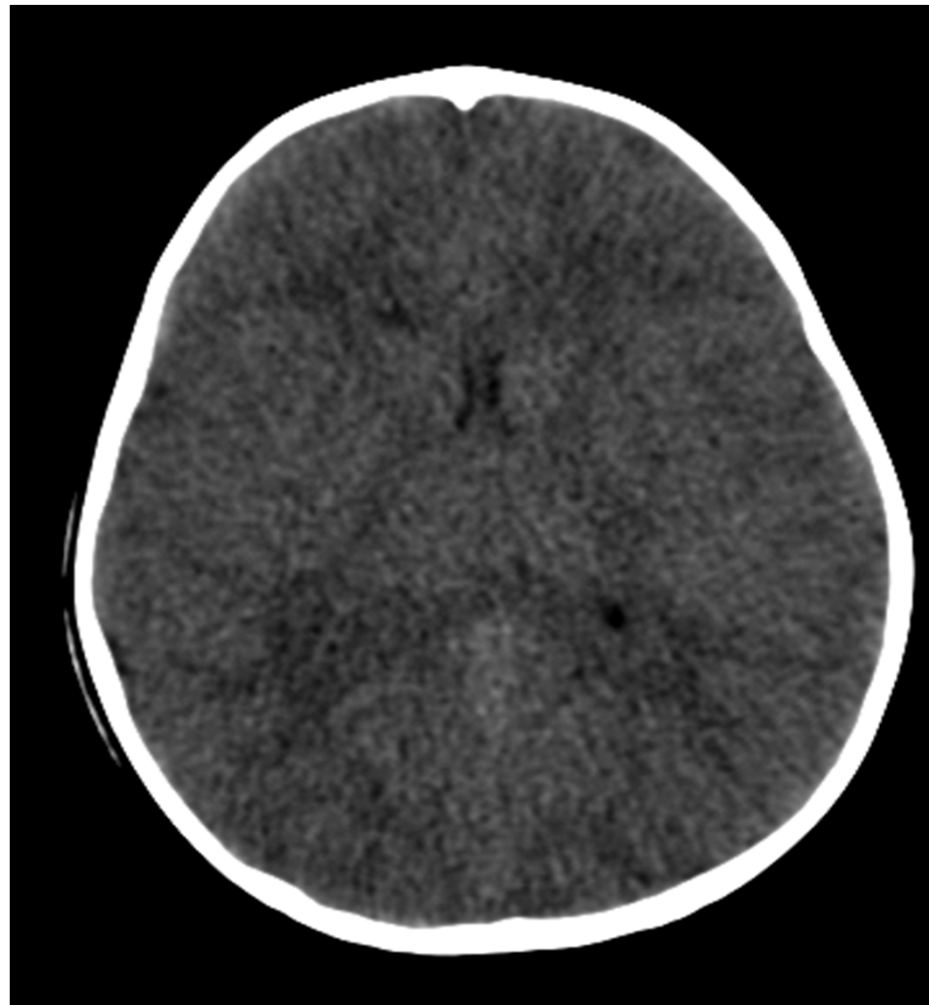
midazolam

tiopentone

Ceftriaxone + cortisone



GB 2.890/mmc (N 800, L1000), PCR 269,5 mg/l, Na 129 mEq/l





## Jasmine, 17 mesi

2 giorni prima era sta vista per otalgia, febbricola e rinite

Diagnosticata OMA e “vigile attesa”



...alla nascita riscontro di sordità  
neurosensoriale monolaterale...

### Investigations for unilateral SNHL

#### Level I

- Clinical history and examination
- Family audiograms
- CMV testing
- Imaging
  - MRI of inner ear and internal auditory meatus
  - CT scan of temporal bone
- Ophthalmic assessment

#### Level II

- Serology (syphilis, HIV, rubella, toxoplasma)
- Genetic testing and/or referral to clinical geneticist
- Renal ultrasound
- Haematology and biochemistry
- Investigations into autoimmune diseases
- Metabolic screen on blood and urine
- Vestibular investigations

## Malformazione cocleovestibolare cistica

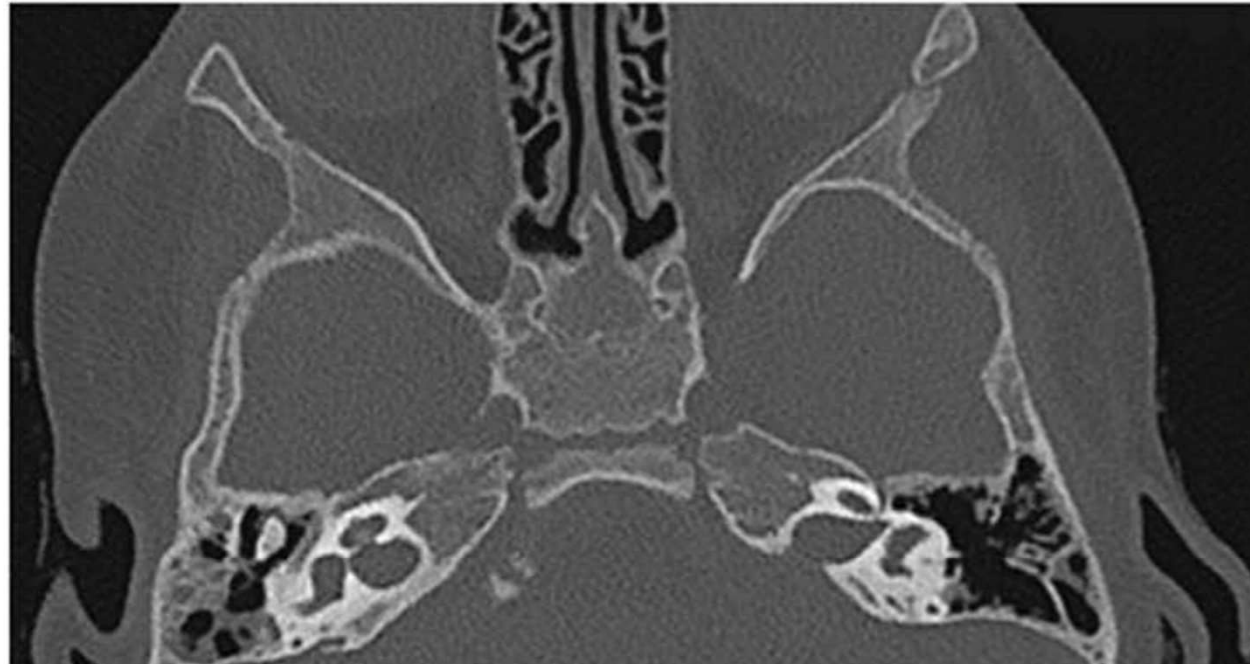
2/3 delle sordità neurosensoriali hanno una malformazione dell'orecchio interno

..fino ad esclusione, antibiotico subito in AOM e stretta osservazione

Obiettiva



GB 19.900/mmc (N 15.400), PCR 9,1 mg/l, VES 27 mm/h



Ceftriaxone + cortisone

miringotomia

Grazie per l'attenzione!

