



Hacia la construcción de una red latinoamericana de
Salud Ambiental Infantil



Antídotos: Algunas controversias

Dr Juan Carlos Ríos

SubDirector CITUC

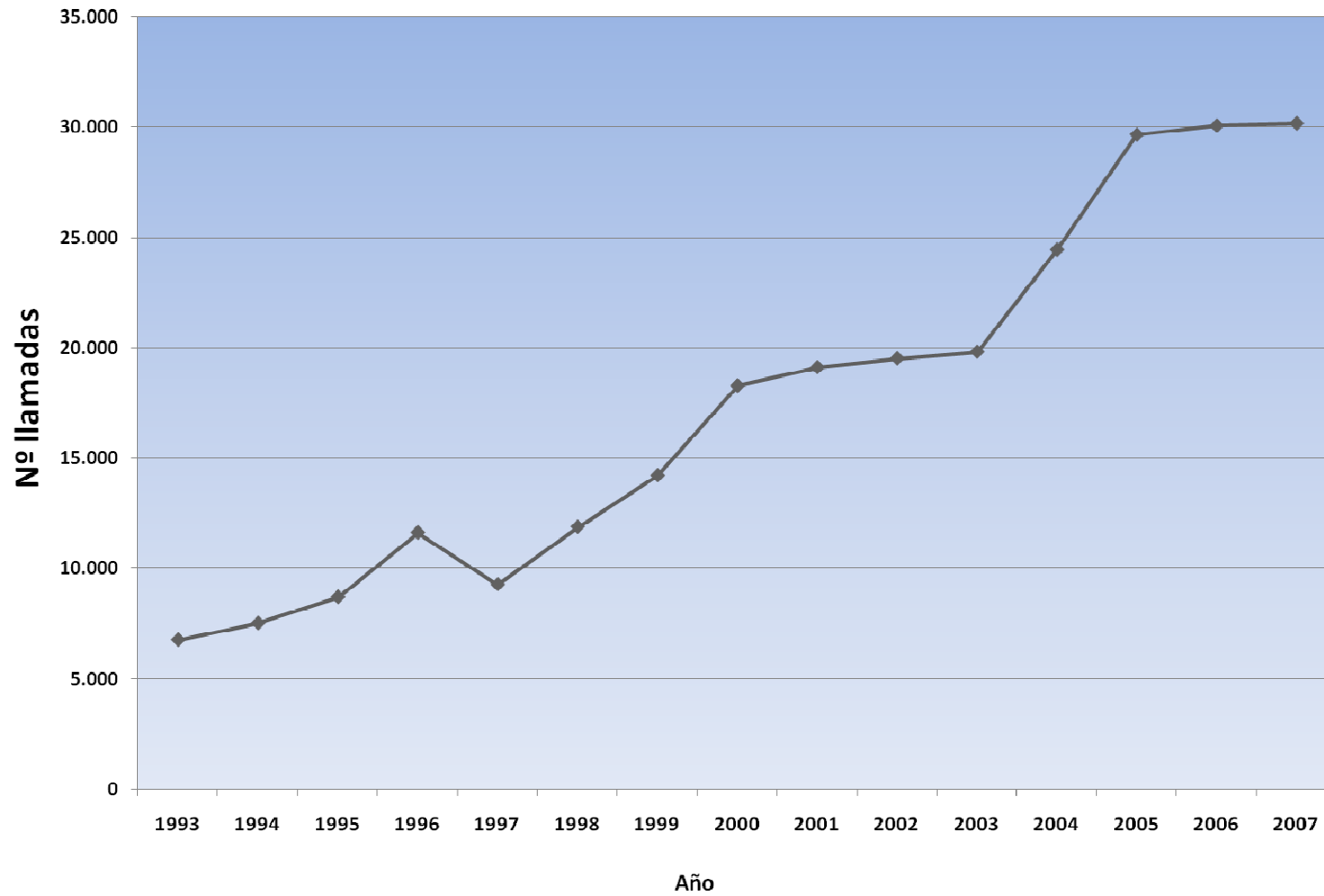


TELEFONO: +56-2- 2473600
FAX: +56-2- 2472112
E-MAIL: jcrios@med.puc.cl





Llamadas totales por año



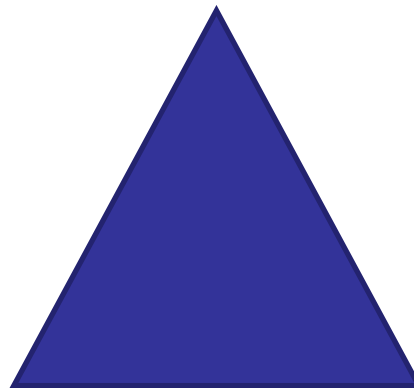
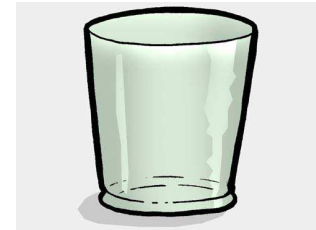
n: 300.000 casos registrados hasta la fecha



Científico, MBE



Intuición, experiencia,
Conocimiento adquirido

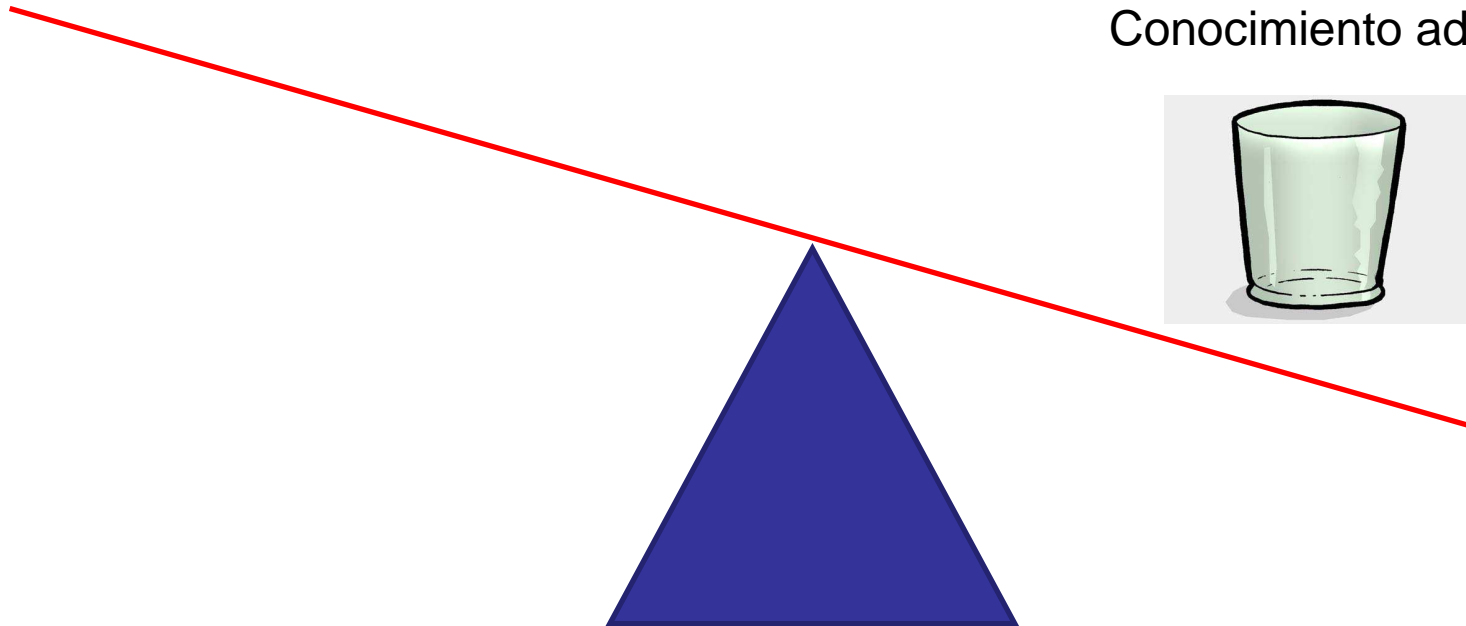
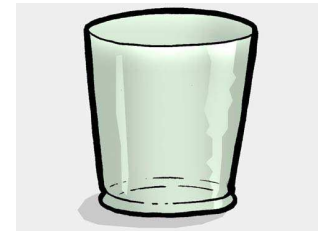




Científico, MBE



Intuición, experiencia,
Conocimiento adquirido





Loxosceles Laeta

¿Hasta cuanto tiempo es efectivo usar el antídoto y en que casos?

n 2008: 555 casos



■ Rev Méd Chile 2007; 135: 1160-1165

Caracterización clínico-epidemiológica telefónica de la mordedura por araña de rincón, en un centro de información toxicológica de Chile, durante el año 2005

Juan Carlos Ríos^a, Marcela Pérez^b, Paula Sánchez^b,
Marli Bettini^b, Juan José Mieres^c, Enrique Paris^d.

*Prevalence and epidemiology of *Loxosceles laeta* bite. Analysis of consultations to a poison control center*



ELSEVIER

Toxicon 48 (2006) 123–137

TOXICON

www.elsevier.com/locate/toxicon

Review

The efficacy of antivenom in loxoscelism treatment

Isolete Pauli^{a,b,*}, Juliana Puka^c, Ida Cristina Gubert^d, João Carlos Minozzo^a

^a*Production and Research Centre of Immunobiological Products, State Department of Health, Paraná, Brazil*

^b*Department of Post-graduation in Biotechnological Processes, Federal University of Paraná, Paraná, Brazil*

^c*City Department of Health, Curitiba, Paraná, Brazil*

^d*Department of Pathology, Federal University of Paraná, Paraná, Brazil*

Received 1 September 2005; received in revised form 26 April 2006; accepted 8 May 2006



Table 3
Evolution of cutaneous and systemic loxoscelism, and antivenom use

Region (<i>n</i>)	Species	Necrosis (%)	Ulcer (%)	Scar (%)	LCH (%)	Death/ <i>n</i> (%)	Death/SL (%)	AV (%)
Paraná, Brazil (923) ¹	<i>L. intermedia</i>	NR	NR	NR	NR	0.2	NR	37.0
Rio Grande do Sul, Brazil (64) ²	<i>Loxosceles</i> sp.	NR	NR	1.6	15.6	1.5	10.0	100.0
Rio Grande do Sul, Brazil (116) ³	<i>Loxosceles</i> sp.	85.0	NR	11.1	22.0	0	0	85.1
São Paulo, Brazil (359) ⁴	<i>L. gaucho</i>	29.1	29.1	4.0	3.6	0	0	66.0
Santa Catarina, Brazil (267) ⁵	<i>L. laeta</i>	56.9	NR	NR	13.1	1.5	11.4	46.8
Santiago, Chile (216) ⁶	<i>L. laeta</i>	50.9	35.1	8.3	15.7	3.7	23.5	3.7
Santiago, Chile (56) ⁷	<i>L. laeta</i>	66.0	45.0	10.8	32.1	7.1	22.2	3.6
Santiago, Chile (250) ⁸	<i>L. laeta</i>	55.2	38.0	8.8	18.8	3.6	19.1	3.2
Lima ^a , Peru (279) ⁹	<i>L. laeta</i>	NR	NR	NR	27.2	NR	NR	NR
Ciudad de Mexico, Mexico (11) ¹⁰	<i>L. reclusa</i>	45.5	NR	9.0	0	0	0	0
Oklahoma, USA (149) ¹¹	<i>L. reclusa</i>	40.0	NR	13.0	0	0	0	0
Oklahoma, USA (254) ¹²	<i>L. reclusa</i>	NR	NR	21.0	0	0	0	0
Tennessee, USA (111) ¹³	<i>L. reclusa</i>	37%	NR	NR	1.8	0	0	0

Key: NR—not reported; *n*—number of patients; CL—cutaneous loxoscelism; SL—systemic loxoscelism; AV—antivenom.

References: ¹Ribeiro et al. (1993), ²Mello Guimarães et al. (1989), ³Mello da Silva et al. (1990), ⁴Málaque et al. (2002), ⁵Sezerino et al. (1998), ⁶Schenone et al. (1989), ⁷Schenone et al. (2001), ⁸Schenone (2003), ⁹Zavaleta (1987), ¹⁰Escalante-Galindo et al. (1999), ¹¹Cacy and Mold (1999), ¹²Mold and Thompson (2004), ¹³Wright et al. (1997).

^aMainly in Lima, with some cases reported in Arequipa, Ica, Junin, Trujillo and Camaná.



Table 4
Dermonecrotic activity neutralization by antivenoms in rabbits

Venom		Antivenom		Results	Study
<i>Loxosceles</i> Sp.	Route	Type	Route		
<i>L. rufipes</i>	ID	Equine polyclonal anti <i>L. rufescens</i> antibody; F(ab') ₂ fragments	IV	Antivenom given until 4 h promoted total neutralization of necrosis; until 8 h, almost total neutralization and, from 16 to 24 h, reduction to half the dermonecrosis	Furlanetto (1961)
<i>L. reclusa</i>	ID	Rabbit polyclonal anti <i>L. reclusa</i> antibody; not reported if complete IgG or fragments	ID, at the lesion site	Antivenom given until 6–12 h did not totally inhibit the microscopic signs of envenoming; given until 24 h, weakly attenuated the toxic effects of the venom	Rees et al. (1981)
<i>L. deserta</i>	ID	Rabbit polyclonal anti <i>L. deserta</i> antibody; Fab fragments	ID, at the lesion site	Antivenom given until 4 h inhibited the inflammation and the dermonecrosis	Gomez et al. (1999)
<i>L. gaucho</i>	ID	Rabbit monoclonal anti <i>L. gaucho</i> antibody	IV	Antivenom given until 6 h reduced dermonecrotic area by around 97%	Guilherme et al. (2001)
<i>L. gaucho</i>	ID	Equine polyclonal anti <i>L. gaucho</i> antibody; F(ab') ₂ fragments	IV	Antivenom given until 12 h reduced dermonecrotic area by around 76%	Guilherme et al. (2001)
<i>L. laeta</i> and <i>intermedia</i>	ID	Rabbit monoclonal anti <i>L. gaucho</i> antibody	IV	Antivenom was not effective in the neutralization of the toxic effects of <i>L. laeta</i> and <i>L. intermedia</i>	Guilherme et al. (2001)



Conclusión

- ✓ Las terapias no son administradas adecuadamente para poder establecer su real eficacia.
- ✓ No existen estudios científicamente validados que avalen su uso posterior a las 24 horas.
- ✓ Es necesario el control de estudios clínicos prospectivos para su dilucidación.



Paracetamol

n 2008: 657 casos



N-Acetilcisteina



Disponibilidad



Efectos adversos



Interventions for paracetamol (acetaminophen) overdose (Review)

Brok J, Buckley N, Glud C





Antidotes

Three trials randomised patients to different antidotes (methionine, cysteine, cysteamine and dimercaprol) (Douglas 1976; Hughes 1977; Hamlyn 1981). One trial randomised patients to different infusion rates of N-acetylcysteine (Kerr 2005). One trial randomised patients with paracetamol-induced fulminant hepatic failure to N-acetylcysteine or placebo (Keays 1991).

Other interventions

Two trials randomised patients to heparin (Gazzard 1974) or fresh frozen plasma (Gazzard 1975) compared to no intervention.

Non-randomised studies or studies including human volunteers

Antidotes

We identified one quasi-randomised trial (Burkhart 1995), 13 observational studies (Crome 1976; Prescott 1976; Smith 1978; Prescott 1979; Vale 1981; Smilkstein 1988; Harrison 1990; Parker 1990; Smilkstein 1991; Spiller 1994; Buckley 1999b; Woo 2000; Ayonrinde 2005), and one randomised trial including human volunteers (Chen 1985) examining different antidotes (cysteamine, methionine, dimercaprol, N-acetylcysteine, or cimetidine) for paracetamol overdose.



Table 1. Antidotes for paracetamol overdose

	Cysteamine	Methionine	Dimercaprol	N-acetylcysteine	Supportive treatment
Treatment delay: 0 h to 10 h					
Mortality	0/97 (0%)	0/143 (0%)	1/26 (4%)	0/949 (0%)	No data
Hepatotoxicity	4/61 (7%)	13/143 (9%)	No data	58/949 (6%)	No data
Treatment delay: 10 h to 24 h					
Mortality	2/24 (8%)	2/41 (5%)	No data	16/1366 (1%)	No data
Hepatotoxicity	16/28 (57%)	17/41 (38%)	No data	359/1366 (25%)	No data
All (0 h to 24 h):					
Mortality	3/133 (2%)	2/197 (1%)	1/26 (4%)	16/2315 (0.7%)	5/90 (6%)
Hepatotoxicity	21/107 (20%)	31/197 (16%)	No data	418/2315 (18%)	52/90 (58%)



Table 5. Activated charcoal in volunteers (Outcome: bioavailability of paracetamol)

Paracetamol dose	No of patients	Charcoal (AC)	Form	Delay (min)	Control	Charcoal	Reduction (%)	Study
5 g	10	30 g	Super-char: 3.150 square meters/g	30	816% (AUC (u) 0-24 h, mean SD)	458%	44.1(P < 0.05)	Rose 1991
1 g	6	10 g	900 to 1500 mg/square meters	30	100% (AUC (u)0-24 h)	40% (range 14-90%)	60 (P < 0.05)	Neuvonen 1983
1 g	5	10 g	900 to 1500 mg/square meters	30	83 4% (AUC (u)0-48 h, mean SD)	577%	31.1 (P < 0.005)	Levy 1976
3 g	8	50 g	Med Corp Acta-Char: 950 square meters/g	60	123 mg*h/ml (AUC (p)0-8 h) (A)	87 mg*h/ml (AUC (p)0-8 h) (A)	29 (A) (P < 0.05)	McNamara 1988
3.6 g (50 mg/kg)	12	50 g	Carbomix: 2000 square meters/g	60	190 mg*h/L (95% CI 119-235) (AUC (p)0-48 h)	539 mg*h/L (95% CI 19.7-135)	66 (P < 0.05)	Christophersen 2002



Conclusión:

La metionina puede ser considerada una alternativa de tratamiento para la intoxicación por paracetamol cuando no esta disponible la N-Acetilcisteina.



Flumazenil

Benzodiazepinas n:2.376 casos
Antidepresivos triciclicos n:623 casos

[Home](#) | [About Cochrane](#) | [Access to Cochrane](#) | [For Authors](#) | [Help](#) | [Save Title to My Profile](#)

 **The Cochrane Library** Evidence for healthcare decision-making 

BROWSE
Cochrane Reviews: [By Topic](#) | [New Reviews](#) | [Updated Reviews](#) | [A-Z](#) | [By Review Group](#)
Other Resources: [Other Reviews](#) | [Clinical Trials](#) | [Methods Studies](#) | [Technology Assessments](#) | [Economic Evaluations](#)

SEARCH

[Advanced Search](#) | [MeSH Search](#) | [Search History](#) | [Saved Searches](#)

Should a benzodiazepine antagonist be used in unconscious patients presenting to the emergency department? (Provisional abstract)

Centre for Reviews and Dissemination

Database of Abstracts of Reviews of Effects 2009 Issue 2
Copyright © 2009 University of York. Published by John Wiley & Sons, Ltd.

Original article: Ngo A S, Anthony C R, Samuel M, Wong E, Ponampalam R. Should a benzodiazepine antagonist be used in unconscious patients presenting to the emergency department?. *Resuscitation*.2007;74(1):27-37. [Links](#)

Record status

This review has been evaluated by a CRD Reviewer as potentially meeting the CRD quality criteria and a structured abstract is in the process of being written. This provisional record is for information, before the full abstract is loaded.

[< Previous](#)



Resuscitation (2007) 74, 27–37



ELSEVIER

REVIEW ARTICLE

RESUSCITATION



www.elsevier.com/locate/resuscitation

Should a benzodiazepine antagonist be used in unconscious patients presenting to the emergency department? ☆, ☆☆☆

Adeline Su-Yin Ngo^{a,*}, Charles Rabind Anthony^{a,b},
Miny Samuel^b, Evelyn Wong^a, R. Ponampalam^a



Conclusión:

El flumazenil puede ser efectivo en la reversión de los pacientes en coma por intoxicaciones, el significado clínico de beneficio es difícil de determinar.



Conclusión:

Actualmente, la evidencia clínica no son suficientes para apoyar la uso rutinario de flumazenil en el servicio de urgencias.

Siguen siendo contraindicaciones sospecha de sobredosis con medicamentos que puedan causar convulsiones y usuarios crónicos de drogas benzodiazepinas.



Oximas y las intoxicaciones por Organofosforados

n: 366 casos en 2008



Oximes for acute organophosphate pesticide poisoning (Review)

Buckley N, Eddleston M, Szinicz L





Conclusión de los autores:

- **No existe suficiente evidencia para determinar si las oximas son dañinas o beneficiosas en el manejo de las intoxicaciones por OP.**
- **Son necesarios mas estudios con las dosis recomendadas por la OMS.**
- **Es necesario identificar sub-grupos de paciente en los cuales seria beneficioso el uso de oximas.**

Authors' conclusions

Current evidence is insufficient to indicate whether oximes are harmful or beneficial in the management of acute organophosphorus pesticide poisoning. A much larger RCT is required to compare the World Health Organization recommended pralidoxime regimen (>30 mg/kg bolus followed by >8 mg/kg/hr infusion) with placebo. There are many theoretical and practical reasons why oximes may not be useful to patients with overwhelming self-poisoning. Such a study will need to be designed with pre-defined sub-group analysis to allow identification of patient sub-groups that may benefit from oximes.



Available online at www.sciencedirect.com

SCIENCE @ DIRECT®

Toxicology in Vitro 19 (2005) 893–897



www.elsevier.com/locate/toxinvit

High concentrations of pralidoxime are needed for the adequate reactivation of human erythrocyte acetylcholinesterase inhibited by dimethoate in vitro

J.C. Ríos ^{a,b}, G. Repetto ^{a,c,*}, I. Galleguillos ^b, A. Jos ^c, A. del Peso ^a, M. Repetto ^c

^a National Institute of Toxicology and Forensic Sciences, Av. Dr. Fedriani s/n, 41009 Sevilla, Spain

^b CITUC, School of Medicine, Pontificia Universidad Católica de Chile

^c Area of Toxicology, University of Sevilla, Spain

Received 17 April 2005; accepted 17 June 2005

Available online 19 August 2005

La capacidad protectora de la pralidoxima se logra solo hasta las 6 horas, alas 24 horas desaparece completamente.



Conclusión:

¿Se debiera utilizar las oximas mas precozmente y a dosis mas elevadas?



MUCHAS GRACIAS

