XXVI REUNIÓN SOCIEDAD ESPAÑOLA DE URGENCIAS DE PEDIATRÍA

PAMPLONA | 16 AL 18 DE JUNIO DE 2022

SUPERVIVENCIA SIN EVIDENCIA:
Aprendiendo para el futuro

ENCUENTRO CON EL EXPERTO

Antibióticos en Urgencias: casos clínicos. Opciones terapéuticas y controversias

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CASO CLÍNICOS INTERACTIVOS

PIN de juego:

447 2424

6 Casos “inspirados” en hechos reales

Controversias... Puede haber varias respuestas correctas... ¡O ninguna!

CASO CLÍNICO 1

Avisan de triaje: paciente oncológico tratamiento quimioterápico febril

PREGUNTA 1: ¿En cuánto tiempo deberíamos atenderle?

Pediatr Blood Cancer 2015;62:807–815

Pediatric Patients Who Receive Antibiotics for Fever and Neutropenia in Less Than 60 min Have Decreased Intensive Care Needs

Jennifer L. Salstrom, MD, PhD,[1,2,3]* Rebecca L. Coughlin, MEd,[1,4] Kathleen Pool, MSN,CPNP,[1] Melissa Bojan, BSN,[1] Camille Mediavilla, BSN,[1] William Schwent, MBA,[4] Michael Rannie, MS,[5] Dawn Law, MBA,[5] Michelle Finnerty, BS,[6] and Joanne Hilden, MD[1,2]

TABLE II. Clinical Outcomes by TTA

	Study period alone			With maintenance phase		
	TTA>60	TTA < 60	*P*-Value	TTA > 60	TTA < 60	*P*-Value
Sample Size N (%)	68 (58.6)	48 (41.4)	n/a	77 (35.0)	143 (65.0)	n/a
Length of Stay						
Mean (days)	7.1	6.4	NS	6.9	5.7	NS
Median (days)	3.9	3.9	NS	3.9	3.8	NS
Standard Deviation	11.2	6.3	NS	10.7	6.1	NS
Duration of Fever						
Mean (days)	3.2	2.6	NS	3.0	2.0	NS
Median (days)	2.0	1.0	NS	2.0	1.0	NS
Standard Deviation	6.9	4.3	NS	6.6	3.4	NS
Need for Imaging Workup (N (%))	4 (5.9)	7 (14.6)	NS	4 (5.2)	13 (9.1)	NS
Bacteremia (N (%))	8 (11.8)	12 (25.0)	NS	10 (13.0)	22 (15.4)	NS
Need for ICU Level Care (N (%))	22 (32.4)	10 (20.8)	NS	23 (29.9)	18 (12.6)	0.003
Mortality (N (%))	3 (4.4)	1 (2.1)	NS	3 (3.9)	1 (0.7)	NS

TTA, time to antibiotic delivery; ICU, intensive care unit; Statistics for Mean, Median, Standard Deviation, and Percent calculated using 2-sample T-test, Moods Median, Levene's Test, or Fisher's exact test, respectively. NS, not significant.

CASO CLÍNICO 1: Anamnesis y EF

- Niño de 12 años en tratamiento por leucemia linfoblástica de alto riesgo en tratamiento inducción dado de alta del hospital hace 24 horas que acude a urgencias por fiebre (38.5ºC) de unas 2 horas de evolución

- TEP alterado por apariencia
- Ctes FC 100 Tª 38ºC TA 120/80
- EF: BEG palidez de piel pulsos vivos llenado capilar inmediato. AR buena ventilación bilateral. AC tonos rítmicos no soplos. Abd blando depresible no HEM. No mucositis

PREGUNTA 2: ¿Qué pruebas complementarias realizarías en este momento?

Pediatr Blood Cancer 2015;62:99–102

Importance of Blood Cultures From Peripheral Veins in Pediatric Patients With Cancer and a Central Venous Line

Mette Møller Handrup, MD, PhD,[1]* Jens Kjølseth Møller, MD, DMSc,[2] Cecilie Rutkjær, MD,[1] and Henrik Schrøder, MD, DMSc[1]

Background. When an infection is suspected in a child with cancer and a central venous line (CVL), cultures are often only obtained from the CVL and not from a peripheral vein (PV). This study was undertaken to evaluate the importance of concomitant blood cultures from the CVL and a PV. ***Procedure.*** Clinical data and the results of all cultures taken concomitantly from the CVL and a PV were registered prospectively in children admitted with fever from April 2008 to December 2012 at the Department of Pediatrics at Aarhus University Hospital Skejby. ***Results.*** During the study period 654 paired cultures obtained from the CVL and from a PV within two hour of each other were included. A true bloodstream infection (BSI) was registered in 112 episodes. In 20 (17%) out of 112, true BSI growth of a microorganism was detected only in the culture from a PV including seven cases of *Escherichia coli* and three cases of *Staphylococcus aureus*. In 52 episodes the same microorganism was cultured from both the CVL and a PV. Twenty-four of these episodes were classified as catheter-related bloodstream infections (CRBSI) using differential time to positivity. In total, 64 (57%) of all true BSI were defined as CRBSI. ***Conclusions.*** Blood cultures should be obtained from a PV in addition to cultures from CVL at the onset of fever in pediatric patients with cancer in order to maximize the findings of true BSIs. The frequency of CRBSI may be over-estimated if blood cultures are drawn from CVL only. Pediatr Blood Cancer 2015;62:99–102.

Key words: bloodstream infection; blood culture; central venous catheter; childhood cancer; differential time to positivity

Impact of Paired Central and Peripheral Blood Cultures in Children With Cancer

Megan D. Burcham, MD, Anneli R. Cochrane, MPH,†‡*
James B. Wood, MD, MS,‡§ and Emily L. Mueller, MD, MSc†‡

Summary: Children with cancer require central venous access which carries risk for line-related infections. The necessity of peripheral and central blood cultures is debated for those with fevers. We evaluated and described results for first episode of paired blood cultures from children with cancer who have a central venous line using retrospective database. Blood culture results, laboratory data, and medical outcomes were included. Descriptive analyses of blood culture results and clinical data were performed. There were 190 episodes of paired positive blood cultures with 167 true positive episodes. Of the true positive episodes, 104 (62.3%) were positive in both central and peripheral cultures, 42 (25.1%) were positive in central only cultures, and 21 (12.6%) were positive in peripheral cultures only. Intensive care unit admission within 48 hours after blood cultures (n = 33) differed significantly: 28.7% for both central and peripheral, 10% for central only, and 0% for peripheral only ($P = 0.009$). Central line removal (n = 34) differed by type of positivity but was not significant: 22.1% for both central and peripheral, 23.8% for central only, and 4.8% for peripheral only ($P = 0.15$). Peripheral blood cultures provided important medical information yet had differences in short-term clinical outcomes. Further evaluation of medical decision making is warranted.

Key Words: infections in immunocompromised hosts, oncology, febrile neutropenia

(*J Pediatr Hematol Oncol* 2022;44:e138–e143)

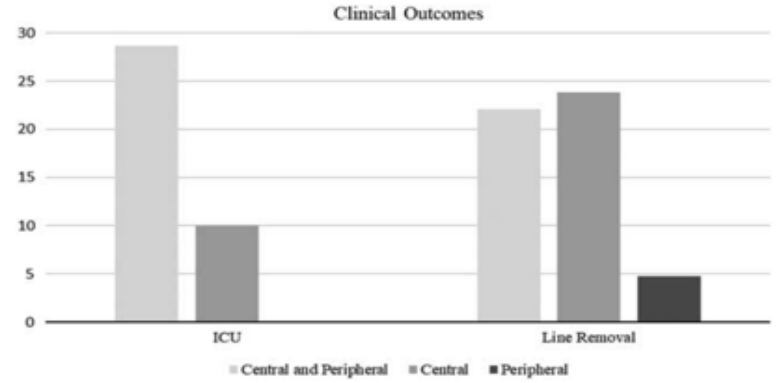

FIGURE 2. Short-term clinical outcomes based on type of positive paired blood culture episode. ICU indicates intensive care unit.

DISCUSSION

In this retrospective review of children with cancer and central venous access, we found that peripheral blood cultures were the only source to identify the pathogen, including highly virulent organisms (eg, *S. aureus*, *C. albicans*), causing true bacteremia in 12.6% of our patient population. In addition, peripheral blood cultures did not significantly increase the number of contaminants compared with central cultures. These

Support Care Cancer (2012) 20:2589–2594
DOI 10.1007/s00520-011-1366-7

ORIGINAL ARTICLE

Diagnostic value of routine chest radiography in febrile, neutropenic children for early detection of pneumonia and mould infections

Stefan D. Roberts · Gregory M. Wells · Nilay M. Gandhi · Nowell R. York · Gabriela Maron · Bassem Razzouk · Randall T. Hayden · Sue C. Kaste · Jerry L. Shenep

Received: 4 November 2011 / Accepted: 26 December 2011 / Published online: 26 January 2012

Abstract
Background Despite recent studies failing to demonstrate the value of routine chest radiography (CXR) in the initial evaluation of the febrile neutropenic patient with cancer, this screening test is advocated by some experts. We evaluated the benefits of CXR for early diagnosis of pulmonary infection at St. Jude Children's Research Hospital (SJCRH) with emphasis on early recognition of mould infections.

Patients and methods We reviewed the courses of 200 consecutive febrile neutropenic pediatric patients to determine if routine CXR at initial evaluation was useful in the identification of clinically occult pneumonia. We also reviewed all cases of proven or probable mould infections from the opening of SJCRH in 1962 until 1998 when routine CXR was no longer practiced in our institution to identify cases that were first recognized by routine CXR.
Results Of 200 febrile neutropenic patients, pulmonary abnormalities consistent with pneumonia were detected by routine CXR in only five patients without pulmonary signs or symptoms. In only one case was a change in management considered. Of the 70 patients with pulmonary mould infection identified from 1962 to 1998, routine CXR was performed in 45 patients at the onset of a febrile, neutropenic episode in which a mould infection was diagnosed. Routine CXR was pivotal in the recognition of the mould infection in only two cases over this 36-year period.
Conclusion CXR is warranted in the evaluation of the newly febrile neutropenic pediatric oncology patient only when respiratory signs or symptoms are present.

Keywords Chest radiograph · Neutropenia · Cancer · Fever · Mould · Children

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S. C. Kaste

- Orina si no se demora el antibiótico. Solo el 12% tienen piuria
- Rx solo si síntomas respiratorios

CASO CLÍNICO 1: Pruebas complementarias

- Hemograma: 600 leucocitos (50 neutrófilos) Hb 8,4, plaq 25000, PCR 35, PCT 1,8
- Hemocultivo central y periférico cursados
- PCR de gripe y coronavirus negativas

PREGUNTA 3: ¿Cuál sería tu actitud ahora?

Tabla 1. Modelos de estratificación de riesgo, validados en pediatría

	Rackoff 1996	Alexander 2002	Rondinelli 2002	Santolaya 2001	Ammann 2003	Ammann 2010
Factores relacionados al paciente y a la enfermedad	Ninguno	LMA, L. Burkitt, LLA en inducción, Recaída MO	CCV 2 puntos Edad ≤ 5 años 1 punto	Recaída de leucemia, Quimioterapia dentro de 7 días del episodio	Compromiso MO, CVC, Leucemia células pre-B	Quimioterapia más intensiva que mantención 4 puntos
Factores relacionados con el episodio	RAM	Hipotensión, Taquipnea, o hipoxia < 94%, cambios Rx Tx, estado mental alterado, mucositis severa, vómitos o dolor abdominal, infección focal, otra razon para hospitalizar	Infección de sitio clínico 4,5 puntos Sin IRA 2,5 puntos Cada grado de fiebre > 38,5 1 punto Hb ≤ 70 g/L	PCR ≥ 90 mg/L Hipotensión Plaquetas ≤ 50.000/ mm³	Ausencia de signos clínicos de infección viral PCR ≥ 50 mg/L RGB ≤ 500/uL HB ≥ 100 g/L	Hb ≥ 90 g/L 5 puntos RGB < 300/ug 3 puntos Plaquetas ≤ 50.000/ mm³ 3 puntos
Formulación de la escala	RAM ≥ 100/ uL = Bajo riesgo de bacteriemia TPH = Alto riesgo	Ausencia de algún factor de riesgo = Bajo riesgo de complicación médica seria TPH = Alto riesgo	Puntaje total < 6= Bajo riesgo de complicación infecciosa seria TPH= Alto riesgo	Ausencia de estos factores o presencia solo de plaquetas bajas o < 7 días de quimioterapia= Bajo riesgo de infección bacteriana invasora	≤ 3 factores de riesgo= Bajo riesgo de infección significativa TPH= Alto riesgo	Puntaje total < 9 = Bajo riesgo de resultado adverso de NF TPH= Alto riesgo
Demostración de validez	USA	Reino Unido	Brasil	Chile	Europa	Europa

Adaptada de Lehrnbecher 2017.

Neutropenia febril de alto riesgo:

Episodio de NF que cumple uno de las siguientes condiciones:

- Leucemia mieloide aguda o leucemia linfoblástica en recaída,
- Hipotensión arterial
- Proteína C reactiva (PCR) cuantitativa ≥ 90 mg/L;
- Número de días desde el último ciclo de quimioterapia ≤ 7 y recuento de plaquetas < 50.000/mm^3.

Rev Chilena Infectol 2021; 38 (6): 857-909

Cochrane Library

Cochrane Database of Systematic Reviews

Beta-lactam versus beta-lactam-aminoglycoside combination therapy in cancer patients with neutropenia (Review)

Paul M, Dickstein Y, Schlesinger A, Grozinsky-Glasberg S, Soares-Weiser K, Leibovici L

PLAIN LANGUAGE SUMMARY

Cancer patients with fever and suspected infection can be treated with a single 'new-generation' beta-lactam antibiotic

Cancer chemotherapy or bone marrow transplantation disrupts the immune system, exposing patients to severe infection. The major sign of infection is fever, and the hallmark of damaged immune defences is a decreased white blood cell count. Patients have usually been treated with a combination of two different classes of antibiotics. Evidence shows that treatment with a new single drug (monotherapy), belonging to the beta-lactam class of antibiotics, is associated with better outcomes. Survival is improved when single-drug therapy is used, and side effects, mainly damage to the kidneys, are more frequent with combination therapy.

2013

Caso Clínico 1: Semanas después...

- El mismo paciente de 12 años con LLA
- Hace 8 días del último tratamiento
- Fiebre buen estado general
- Analítica con 400 neutrófilos y Hb 8,9 y plaq 65000. PCR 48

PREGUNTA 4: ¿Cuál sería tu actitud ahora?

Neutropenia febril de bajo riesgo

Episodio de NF que NO cumple NINGUNA de las siguientes condiciones:

- Leucemia mieloide aguda o leucemia linfoblástica en recaída,
- Hipotensión arterial
- Proteína C reactiva (PCR) cuantitativa ≥ 90 mg/L
- Número de días desde el último ciclo de quimioterapia ≤ 7 y recuento de plaquetas < 50.000/mm³.

- No necesario antibioterapia antipseudomona

Resumen simplificado

Título: El tratamiento ambulatorio de pacientes oncológicos con evento neutropénico febril de bajo riesgo es eficaz

Pregunta de revisión. ¿Es seguro y eficaz el tratamiento ambulatorio con antibióticos para las personas con cáncer que tienen niveles bajos de neutrófilos (tipo de glóbulos blancos) y desarrollan fiebre (llamada neutropenia febril), generalmente como resultado de la quimioterapia?

Fundamento. Los neutrófilos (un tipo de glóbulo blanco) son fundamentales para combatir las infecciones bacterianas. Las personas que reciben tratamiento contra el cáncer suelen tener niveles bajos de neutrófilos, lo que se denomina neutropenia, generalmente a causa del tratamiento de quimioterapia. Esto los hace susceptibles de contraer infecciones, que pueden llegar a ser graves y potencialmente mortales muy rápidamente. Esto se denomina sepsis neutropénica. Durante muchos años, las personas con cáncer que desarrollan una fiebre mientras están neutropénicas (llamada fiebre neutropénica) han recibido antibióticos para evitar que desarrollen una sepsis neutropénica abrumadora. Dependiendo de la duración de la neutropenia, así como del tipo de cáncer, la edad y otros síntomas, los pacientes pueden clasificarse en dos grupos de riesgo: alto o bajo riesgo de desarrollar una infección grave. Recientemente, se ha demostrado que el tratamiento con antibióticos orales (medicamentos administrados en forma de líquido o comprimidos por vía oral) es tan eficaz como los tratamientos intravenosos (medicamentos inyectados en una vena). Sin embargo, no está claro si proporcionar el tratamiento en un entorno ambulatorio es tan seguro como la terapia administrada en un entorno hospitalario.

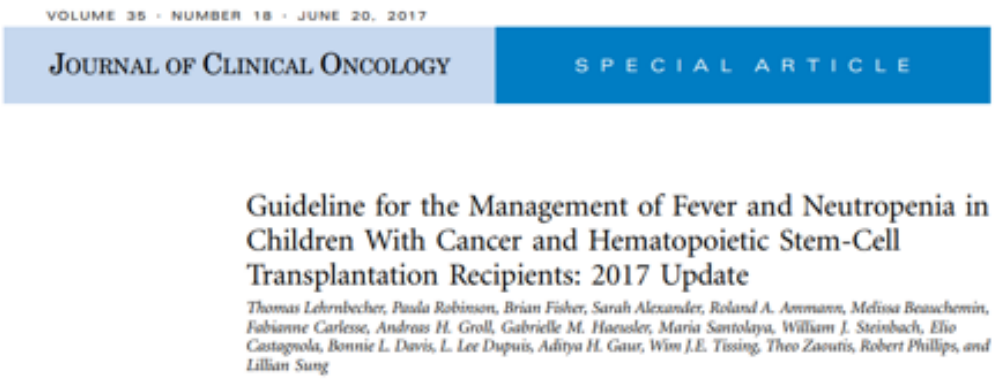
Características del estudio. Diez estudios (994 participantes) proporcionaron información para la revisión. Estos compararon el tratamiento antibiótico ambulatorio (491 participantes) frente al tratamiento hospitalario (503 participantes) en personas con cáncer que desarrollaron neutropenia febril. Seis estudios se realizaron en adultos (628 participantes) y cuatro en niños (366 participantes). Estos diez ensayos compararon la eficacia en términos de desaparición de los signos de infección (principalmente fiebre) y nueve estudios evaluaron el efecto sobre la mortalidad (muerte). Ocho estudios registraron el número de días de tratamiento para la desaparición de la fiebre. Cinco estudios compararon la duración de la neutropenia entre los pacientes externos y los internos. Cinco estudios analizaron la duración del uso de antibióticos y seis la duración de la hospitalización. Dos estudios evaluaron la calidad de vida de los pacientes. En ocho de los diez estudios, el tratamiento antibiótico ambulatorio formaba parte de un programa de alta precoz, es decir, los antibióticos se administraban durante unos días en el hospital y luego los participantes eran dados de alta a casa. En los otros dos estudios, los antibióticos se iniciaron en el domicilio.

Resultados clave. La terapia antibiótica ambulatoria es probablemente tan efectiva como la terapia hospitalaria en personas (tanto en adultos como en niños) con cáncer que desarrollan neutropenia febril para mejorar los signos de infección, incluyendo la reducción de la fiebre. Probablemente hubo poca o ninguna diferencia en la mortalidad entre la terapia ambulatoria y la hospitalaria, así como en la duración del tratamiento con antibióticos, o la frecuencia de eventos adversos relacionados con el uso de antibióticos. El tratamiento en régimen ambulatorio puede reducir el número de días que los pacientes necesitan ser tratados en el hospital.

Certeza de la evidencia. En general, los estudios tenían una certeza moderada.

Mensajes para llevarse a casa:

- Tratamiento precoz en pacientes neutropénicos febriles
- Clasificar bajo riesgo/alto riesgo
- Hemocultivos centrales y periféricos
- Beta lactámico/Betalactámico antipseudomona


VOLUME 35 · NUMBER 18 · JUNE 20, 2017
JOURNAL OF CLINICAL ONCOLOGY
SPECIAL ARTICLE

Guideline for the Management of Fever and Neutropenia in Children With Cancer and Hematopoietic Stem-Cell Transplantation Recipients: 2017 Update

Thomas Lehrnbecher, Paula Robinson, Brian Fisher, Sarah Alexander, Roland A. Ammann, Melissa Beauchemin, Fabianne Carlesse, Andreas H. Groll, Gabrielle M. Haeusler, Maria Santolaya, William J. Steinbach, Elio Castagnola, Bonnie L. Davis, L. Lee Dupuis, Aditya H. Gaur, Wim J.E. Tissing, Theo Zaoutis, Robert Phillips, and Lillian Sung


Documento rci

Manejo de los episodios de neutropenia febril en niños con cáncer. Consenso de la Sociedad Latinoamericana de Infectología Pediátrica 2021

Management of episodes of febrile neutropenia in children with cancer. Consensus of the Latin American Society of Pediatric Infectious Diseases 2021

María E. Santolaya[1], Verónica Contardo[2], Juan P. Torres[3], Eduardo López-Medina[4], María T. Rosanova[5], Ana M. Álvarez[6], Valentina Gutiérrez[6], Ximena Claverie[6], Marcela Rabello[7], Marcela Zubieta[7], Martha I. Álvarez-Olmos[8], Germán Camacho[9], Pahola Pérez[10], Cristina Mariño[11], Carlos Garces[12], Wilfrido Coronell[13], Pío López[14], Sandra Gómez[15], Carolina Epelbaum[16], Gustavo Ezcurra[16], Aurelia Fallo[16], Martha Avilés-Robles[16], Tanya Díaz-Cadena[17], María Elena Martínez-Bustamante[18] y Enid Alejandra Nava-Ruiz[19], en representación del grupo Latinoamericano de Neutropenia febril

CASO CLÍNICO 2

CASO CLÍNICO 2

Niña de 26 meses que acude por cuadro febril (39,2ºC ax) y tos húmeda de 3 días de evolución. Le ven “buen temple” y no han notado dificultad respiratoria ni otra sintomatología.

AP: no de interés. No alergias conocidas. CV completo

EF: satO2 97%, FR 38 rpm. BEG, normocoloreada y normohidratado. No adenopatías. No exantemas ni petequias. Eupneica. AP: Buena entrada de aire bilateral con crepitantes de predominio en base izquierda. ORL sin alteraciones. Signos meníngeos negativos.

PREGUNTA 1: ¿Qué actitud te parece menos correcta?

No está indicado solicitar Rx en toda sospecha de neumonía

- **Rx tór** nicos”
- **Ecogr** quible y ausen

SEPAR habla

Documento de consenso sobre la neumonía adquirida en la comunidad en los niños. SENP-SEPAR-SEIP☆

Anselmo Andrés-Martín[a,*,1], Amparo Escribano Montaner[b,1], Joan Figuerola Mulet[c,1], Maria Luz García García[d,1], Javier Korta Murua[e,1], David Moreno-Pérez[f,2], Carlos Rodrigo-Gonzalo de Liria[g,2] y Antonio Moreno Galdó[h,i,1]

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INFORMACIÓN DEL ARTÍCULO

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Recibido el 27 de noviembre de 2019
Aceptado el 30 de marzo de 2020

RESUMEN

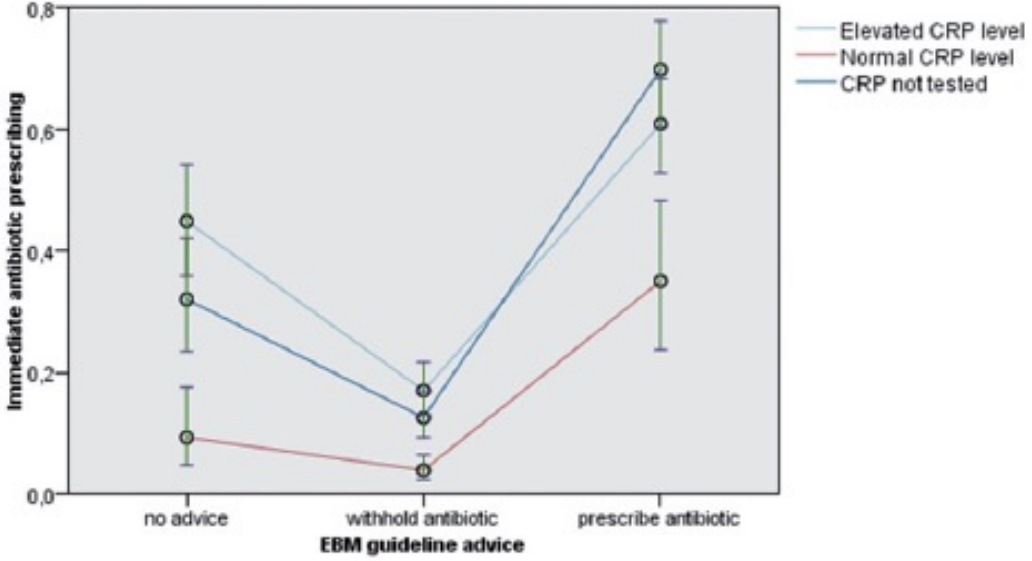
La neumonía adquirida en la comunidad (NAC) es una enfermedad prevalente en la edad pediátrica y que ofrece frecuentemente dudas tanto diagnósticas como terapéuticas. Se ha realizado un consenso entre SEPAR, SENP y SEIP, con las siguientes conclusiones:

Episodios previos de neumonías
Mala respuesta al tratamiento antibiótico, evolución prolongada
Exclusión de otras enfermedades alternativas (aspiración de cuerpo extraño, insuficiencia cardíaca, etc.)

POCT puede disminuir prescripción inadecuada de antibióticos

Point-of-care CRP matters: normal CRP levels reduce immediate antibiotic prescribing for acutely ill children in primary care: a cluster randomized controlled trial

Marieke B. Lemiengre[a], Jan Y. Verbakel[b,c], Roos Colman[a], Kaatje Van Roy[a], Tine De Burghgraeve[c], Frank Buntinx[c,d], Bert Aertgeerts[c], Frans De Baets[e] and An De Sutter[a]



CASO CLÍNICO 2

PCR capilar: 84 mg/L

Ecografía torácica: zona de hepatización del parénquima en campos pulmonares inferiores posteriores izquierdos. No signos de disminución de la vascularización. Se observa además una mínima lengüeta de derrame pleural.

JC: Neumonía bacteriana no complicada en LII

PREGUNTA 2: ¿Qué tratamiento indicarías a la paciente?

Pautas cortas 5 días de antibioterapia en neumonía leve

JAMA Pediatrics | Original Investigation

Short-Course Antimicrobial Therapy for Pediatric Community-Acquired Pneumonia
The SAFER Randomized Clinical Trial

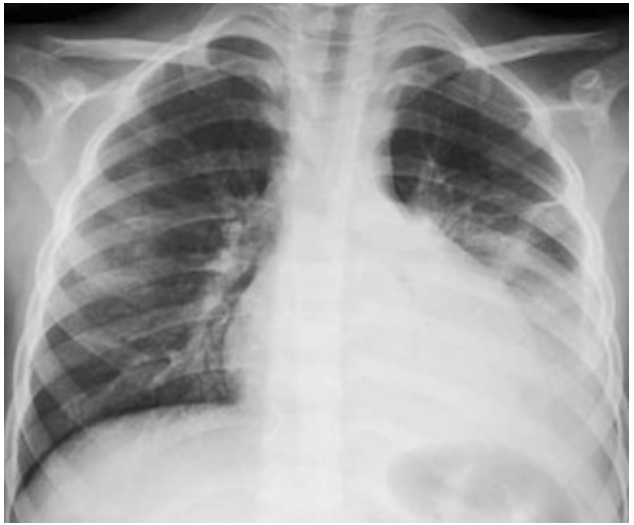
Jeffrey M. Pernica, MD; Stuart Harman, MD; April J. Kam, MD; Redjana Carciumaru, MSc; Thuva Vanniyasingam, PhD; Tyrus Crawford, BSocSc; Dale Dalgleish, RN, BHScN; Sarah Khan, MD; Robert S. Slinger, MD; Martha Fulford, MD; Cheryl Main, MD; Marek Smieja, MD, PhD; Lehana Thabane, PhD; Mark Loeb, MD

Table 2. Clinical Cure Outcomes

	Intention-to-treat analysis			Per protocol analysis (adherent to medications)			Strict per protocol analysis (adherent to medications and consolidation on radiograph)		
	Patient group[a]			Patient group[a]			Patient group[a]		
Outcome	Intervention (n = 140)	Control (n = 141)	RD (97.5% 1-sided CL)	Intervention (n = 122)	Control (n = 114)	RD (97.5% 1-sided CL)	Intervention (n = 86)	Control (n = 87)	RD (97.5% 1-sided CL)
Clinical cure (primary)	108 (85.7)	106 (84.1)	0.023 (−0.061 to ∞)	101 (88.6)	99 (90.8)	−0.016 (−0.087 to ∞)	73 (89.0)	74 (89.2)	−0.011 (−0.096 to ∞)

CASO CLÍNICO 2: Evolución

Acude 3 días más tarde por empeoramiento. Continúa con fiebre elevada, está más decaída y le notan que respira más rápido. Se queja de dolor pero saben donde exactamente.



EF: satO2 94-95%, FR 48 rpm. Regular estado general, palidez de piel, no de mucosas. Polipnea con leve tiraje subcostal. AP: Hipoventilación en base izquierda. Resto sin cambios

AS: Hb 9,8 g/dL, 22.800 leucocitos, 15.000 neutrófilos, 720.000 plaquetas, PCR 120 mg/L, PCT 2,8 ng/mL

Ingreso en planta de hospitalización con Ampicilina iv

CASO CLÍNICO 2

Ecografía torácica: derrame pleural no tabicado de 2,3 cm de diámetro máximo con contenido ecogénico en su interior.

Citoquímica LP: compatible con empiema.

Cultivo: pendiente

Se detecta mediante PCR *S. aureus* que expresa genes de resistencia a meticilina

Pregunta 3: ¿Qué tratamiento antibiótico emplearías ahora?

Clinical Practice Guidelines by the Infectious Diseases Society of America for the Treatment of Methicillin-Resistant *Staphylococcus aureus* Infections in Adults and Children

IV. What is the management of MRSA pneumonia?

Pneumonia

32. For hospitalized patients with severe community-acquired pneumonia defined by any one of the following: (1) a requirement for intensive care unit (ICU) admission, (2) necrotizing or cavitary infiltrates, or (3) empyema, empirical therapy for MRSA is recommended pending sputum and/or blood culture results (**A-III**).

33. For health care–associated MRSA (HA-MRSA) or CA-MRSA pneumonia, IV vancomycin (**A-II**) or linezolid 600 mg PO/IV twice daily (**A-II**) or clindamycin 600 mg PO/IV 3 times daily (**B-III**), if the strain is susceptible, is recommended for 7–21 days, depending on the extent of infection.

34. In patients with MRSA pneumonia complicated by empyema, antimicrobial therapy against MRSA should be used in conjunction with drainage procedures (**A-III**).

Pediatric considerations

35. In children, IV vancomycin is recommended (**A-II**). If the patient is stable without ongoing bacteremia or intravascular infection, clindamycin 10–13 mg/kg/dose IV every 6–8 h (to administer 40 mg/kg/day) can be used as empirical therapy if the clindamycin resistance rate is low (eg, <10%) with transition to oral therapy if the strain is susceptible (**A-II**). Linezolid 600 mg PO/IV twice daily for children ≥12 years of age and 10 mg/kg/dose every 8 h for children <12 years of age is an alternative (**A-II**).

Pediatric Drugs (2021) 23:549–563
https://doi.org/10.1007/s40272-021-00468-w

REVIEW ARTICLE

Ceftaroline Fosamil for Treatment of Pediatric Complicated Skin and Soft Tissue Infections and Community-Acquired Pneumonia

Susanna Esposito[1] · Timothy J. Carrothers[2] · Todd Riccobene[2] · Gregory G. Stone[3] · Michal Kantecki[4]

Accepted: 16 August 2021 / Published online: 31 August 2021

Cefalosporina 5ªG
Aprobado para su uso desde periodo neonatal
Actividad frente a MRSA
Indicaciones IPPB y Neumonía adquirida en la comunidad

Mensajes para llevarse a casa:

- No es necesario realizar una radiografía de tórax en toda sospecha de neumonía
- Las pruebas POCT pueden ayudarnos a disminuir el consumo inadecuado de antibióticos en infecciones respiratorias
- Las pautas cortas de 5 días de antibioterapia son adecuadas para neumonías leves adquiridas en la comunidad
- La ceftarolina es una cefalosporina de 5ºG con actividad frente a MRSA aprobada para tratamiento de IPPB y neumonía adquirida en la comunidad

CASO CLÍNICO 3

CASO CLÍNICO 3

- Niña de 18 meses con fiebre de 39-40ªC de unos 5 días de evolución
- No tos ni mucosidad ni otros síntomas
- EXPL

  -TEP estable

  -Ctes: Tª 37,5ºC, FC 100, TA 95/55, Sat 96%

  -EF: BEG buen aspecto y color no exantemas ni petequias ACR normal ORL faringe hiperémica Abd blando depresible no doloroso, no hepato-esplenomegalia

PREGUNTA 1: ¿Qué prueba complementaria no realizarías?

Cochrane Library

Cochrane Database of Systematic Reviews

Efficacy and safety of rapid tests to guide antibiotic prescriptions for sore throat (Review)

Cohen JF, Pauchard JY, Hjelm N, Cohen R, Chalumeau M

Authors' conclusions

Rapid testing to guide antibiotic treatment for sore throat in primary care probably reduces antibiotic prescription rates by 25% (absolute risk difference), but may have little or no impact on antibiotic dispensing. More studies are needed to assess the efficacy and safety of rapid test-guided antibiotic prescribing, notably to evaluate patient-centred outcomes and variability across subgroups (e.g. adults versus children).

Nivel evidencia moderado para prescripción

Nivel evidencia muy bajo para antibióticos dispensados

2020

A Pragmatic Study to Evaluate the Use of a Rapid Diagnostic Test to Detect Group A Streptococcal Pharyngitis in Children With the Aim of Reducing Antibiotic Use in a UK Emergency Department

Chris Bird, FRCPCH, Gemma Winzor, FRCPath,† Katherine Lemon, MSc,‡ Alasdair Moffat, MCEM,‡ Tina Newton, FRCPCH,‡ and Jim Gray, FRCPath§*

Objective: Sore throat is a common presentation to the children's emergency department (ED), and many patients are likely prescribed antibiotics unnecessarily. We aimed to reduce antibiotic prescribing for sore throat in our UK ED through use of an established scoring system combined with a rapid diagnostic test (RDT) to detect group A streptococcal (GAS) pharyngitis.

Methods: AB single-subject and diagnostic accuracy studies were used to measure both antibiotic prescribing rates over time and the performance of the McIsaac clinical score combined with RDT to screen for and treat GAS pharyngitis. All children between the age of 6 months and 16 years with symptoms of sore throat were eligible for inclusion. The study adhered to SQUIRE guidelines.

Results: During 2014 and 2016, antibiotic prescribing rates for 210 children at baseline (median age, 3 years) and 395 children during the intervention (median age, 2 years) were assessed. The baseline prescribing rate was 79%, whereas rates after intervention were 24% and 27%, respectively. The RDT had an acceptable false-negative rate of 7.9%, poor sensitivity of 64.3%, and a negative predictive value of 92.1% when compared with conventional throat culture. A McIsaac score of 3 or more had good sensitivity (92.11%) but very low specificity (12.62%) for predicting GAS infection.

Conclusions: Despite poor RDT sensitivity and the McIsaac score's poor specificity in children, their use in combination decreased antibiotic prescribing rates in a children's ED setting.

Key Words: antibiotic prescribing, group A streptococcus, pharyngitis, point-of-care testing

(*Pediatr Emer Care* 2018;00: 00–00)

The most recent guidance in the United Kingdom (*SIGN*, 2010) states that both RDTs and throat swabs are unable to differentiate between GAS carrier state and invasive infection, and so RDTs are currently not recommended.[2] A 2006 study in a UK PED showed an RDT to have poor sensitivity (65.6%), and plans to use RDTs to detect GAS pharyngitis were dropped.[3] Two similar studies in North American made similar conclusions.[4,5] But a recent UK study showed that not using a clinical score for GAS pharyngitis in the ED led to higher prescribing rates.[6]

Rapid diagnostic tests are used routinely in the United States but normally in conjunction with backup throat swabs for negative results, a resource-intensive option.[7] A recent systematic review concluded that RDTs lacked both sensitivity and specificity in children but could only speculate as to why, with possible differences between studies carried out in normal clinical versus research settings, technical variations between test manufacturers, inoculum size, and inadequate user training.[8]

Guidance from the European Society of Clinical Microbiology and Infectious Diseases states that backup swabs are not required for negative RDTs and that RDTs, when combined with a modified clinical score for children, have adequate sensitivity and specificity for targeting antibiotic treatment in children.[9] A recent French study showed variations in RDT sensitivity were limited to children with light inocula. The authors concluded that the test's negative predictive value remained useful, even with false-negative rates up to 10% in settings where suppurative and nonsuppurative complications of GAS pharyngitis are rare (resource-rich settings).[10]

An Pediatr (Barc). 2020;93(3):206.e1–206.e8

analesdepediatría

www.analesdepediatria.org

Tabla 3 Casos en los que se deberían solicitar pruebas microbiológicas, según el grupo de expertos

- Mayores de 3 años con clínica de FAA, en ausencia de síntomas sugestivos de infección vírica: rinitis, estridor, vesículas, úlceras en paladar, etc. Calidad de la evidencia: I. Fuerza de la recomendación a favor: A
- Menores de 3 años con clínica de FAA, y contacto estrecho con pacientes con FAA por EbhGA confirmada o con signos muy predictivos de etiología estreptocócica, como exantema escarlatiniforme o clínica de estreptococosis. Calidad de la evidencia: II. Fuerza de la recomendación a favor: A
- Sospecha de FRA o de GMNPE. FAA en pacientes con FRA y en sus convivientes. Contactos domiciliarios de pacientes con diagnóstico reciente de GMNPE. Calidad de la evidencia: II. Fuerza de la recomendación a favor: B
- FAA y elevada tasa de enfermedad estreptocócica invasiva. Contactos de pacientes con enfermedad estreptocócica invasiva. Calidad de la evidencia: II. Fuerza de la recomendación a favor: B
- Contactos domiciliarios de pacientes con FAA, en caso de transmisión intrafamiliar repetida. Calidad de la evidencia: II. Fuerza de la recomendación a favor: A

EbhGA: estreptococo beta-hemolítico del grupo A; FAA: faringoamigdalitis aguda; FRA: fiebre reumática aguda; GMNPE: glomerulonefritis aguda postestreptocócica.

PREGUNTA 2: ¿Qué tratamiento le prescribirías?

27 ensayos: 12835 pacientes

- Reducción síntomas, mayor efecto a los 3 días, NNTB al tercer día <6 y al séptimo día 21
- Reducción complicaciones no supurativas, glomerulonefritis.., fiebre reumática reducción de 1/3
- Reducción de otitis y sinusitis 15 días, 2 meses

Calidad de la evidencia moderada alta, pocos ensayos recientes

Authors' conclusions

Antibiotics confer relative benefits in the treatment of sore throat. However, the absolute benefits are modest. Protecting sore throat sufferers against suppurative and non-suppurative complications in high-income countries requires treating many with antibiotics for one to benefit. This NNTB may be lower in low-income countries. Antibiotics shorten the duration of symptoms by about 16 hours overall.

2013

Cochrane Library

Cochrane Database of Systematic Reviews

Different antibiotic treatments for group A streptococcal pharyngitis (Review)

van Driel ML, De Sutter AIM, Habraken H, Thorning S, Christiaens T

OBJECTIVES

To assess the evidence on the comparative efficacy of different antibiotics in: (a) alleviating symptoms (pain, fever); (b) shortening the duration of the illness; (c) preventing relapse; and (d) preventing complications (suppurative complications, acute rheumatic fever, post-streptococcal glomerulonephritis). To assess the evidence on the comparative incidence of adverse effects and the risk-benefit of antibiotic treatment for streptococcal pharyngitis.

Study characteristics

We included 19 trials (18 publications) that involved 5835 people. Trials studied different antibiotics for people with sore throat who tested positive for GABHS, and were aged from one month to 80 years. Nine trials included only children; and nine included people aged 12 years or older. Most studies were published over 15 years ago; all but one reported on clinical outcomes.

Authors' conclusions

There were no clinically relevant differences in symptom resolution when comparing cephalosporins and macrolides with penicillin in the treatment of GABHS tonsillopharyngitis. Limited evidence in adults suggests cephalosporins are more effective than penicillin for relapse, but the NNTB is high. Limited evidence in children suggests carbacephem is more effective than penicillin for symptom resolution. Data on complications are too scarce to draw conclusions. Based on these results and considering the low cost and absence of resistance, penicillin can still be regarded as a first choice treatment for both adults and children. All studies were in high-income countries with low risk of streptococcal complications, so there is need for trials in low-income countries and Aboriginal communities where risk of complications remains high.

2016

Penicillin V four times daily for five days versus three times daily for 10 days in patients with pharyngotonsillitis caused by group A streptococci: randomised controlled, open label, non-inferiority study

Gunilla Skoog Ståhlgren,[1] Mia Tyrstrup,[2,3] Charlotta Edlund,[1] Christian G Giske,[4,5] Sigvard Mölstad,[3] Christer Norman,[6] Karin Rystedt,[7,8] Pär-Daniel Sundvall,[8,9] Katarina Hedin[3,10]

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Cite this as: *BMJ* 2019;367:l5337
http://dx.doi.org/10.1136/bmj.l5337

Accepted: 8 August 2019

ABSTRACT

OBJECTIVE

To determine whether total exposure to penicillin V can be reduced while maintaining adequate clinical efficacy when treating pharyngotonsillitis caused by group A streptococci.

DESIGN

Open label, randomised controlled non-inferiority study.

SETTING

17 primary healthcare centres in Sweden between September 2015 and February 2018.

PARTICIPANTS

Patients aged 6 years and over with pharyngotonsillitis caused by group A streptococci and three or four Centor criteria (fever ≥38.5°C, tender lymph nodes, coatings of the tonsils, and absence of cough).

INTERVENTIONS

Penicillin V 800 mg four times daily for five days (total 16 g) compared with the current recommended dose of 1000 mg three times daily for 10 days (total 30 g).

MAIN OUTCOME MEASURES

Primary outcome was clinical cure five to seven days after the end of antibiotic treatment. The non-inferiority margin was prespecified to 10 percentage points. Secondary outcomes were bacteriological eradication, time to relief of symptoms, frequency of relapses, complications and new tonsillitis, and patterns of adverse events.

RESULTS

Patients (n=433) were randomly allocated to the five day (n=215) or 10 day (n=218) regimen. Clinical cure in the per protocol population was 89.6% (n=181/202) in the five day group and 93.3% (n=182/195) in the 10 day group (95% confidence interval −9.7 to 2.2). Bacteriological eradication was 80.4% (n=156/194) in the five day group and 90.7% (n=165/182) in the 10 day group. Eight and seven patients had relapses, no patients and four patients had complications, and six and 13 patients had new tonsillitis in the five day and 10 day groups, respectively. Time to relief of symptoms was shorter in the five day group. Adverse events were mainly diarrhoea, nausea, and vulvovaginal disorders; the 10 day group had higher incidence and longer duration of adverse events.

CONCLUSIONS

Penicillin V four times daily for five days was non-inferior in clinical outcome to penicillin V three times daily for 10 days in patients with pharyngotonsillitis caused by group A streptococci. The number of relapses and complications did not differ between the two intervention groups. Five day treatment with penicillin V four times daily might be an alternative to the currently recommended 10 day regimen.

TRIAL REGISTRATION

Nakao et al. BMC Pediatrics (2019) 19:205
https://doi.org/10.1186/s12887-019-1582-8

BMC Pediatrics

RESEARCH ARTICLE Open Access

Amoxicillin effect on bacterial load in group A streptococcal pharyngitis: comparison of single and multiple daily dosage regimens

Akihiro Nakao[1*], Ken Hisata[1], Makoto Fujimori[2], Nobuaki Matsunaga[1], Mitsutaka Komatsu[1] and Toshiaki Shimizu[1]

Abstract

Background: Culture tests have demonstrated that once-daily administration of amoxicillin may be effective in the treatment of group A streptococcal (GAS) pharyngitis. However, culture methods do not allow accurate assessments of bacterial load changes because of the suppressive effect of the antibiotic on bacterial growth. In this study, we used real-time PCR to compare the effectiveness of once-daily and multiple-daily amoxicillin treatment for pediatric patients with GAS pharyngitis.

Methods: The subjects were children (≧3 years of age) diagnosed with GAS pharyngitis. Amoxicillin was administered at a dose of 40–50 mg/kg/day, divided into one (QD), two (BID), or three (TID) daily doses, for 10 days. Throat swabs were collected before treatment (visit 1), 1 to 3 days after treatment (visit 2), and 9 to 11 days after treatment (visit 3), and GAS copies were quantified by real-time PCR. The main compared parameters were the rate of negative PCR results and the number of GAS determined by PCR in throat swabs between each regimen.

Results: Samples were collected from 34 patients (QD, 12; BID, 15; TID, 7) at visit 1, 32 patients (QD, 11; BID, 14; TID, 7) at visit 2, and 25 patients (QD, 7; BID, 11; TID, 7) at visit 3. The rates of negative PCR result for QD, BID, and TID regimens were 18.2, 0, and 14.3% at visit 2, and 85.7, 72.7, and 85.7% at visit 3, respectively. The median values of bacterial load for QD, BID, and TID groups at visit 1 were 1.4×10^6, 8.2×10^5, and 5.4×10^5 copies/μL. At visit 2, they comprised 3.8×10^3, 1.1×10^3, and 2.8×10^3 copies/μL, respectively, whereas at visit 3, GAS copies were mostly undetectable. There was no statistical difference in the negative results and median value of GAS copies between regimens at any stage.

Conclusions: Our results obtained by a molecular biology approach indicated that the QD regimen was as effective in eradicating GAS infection as BID or TID.

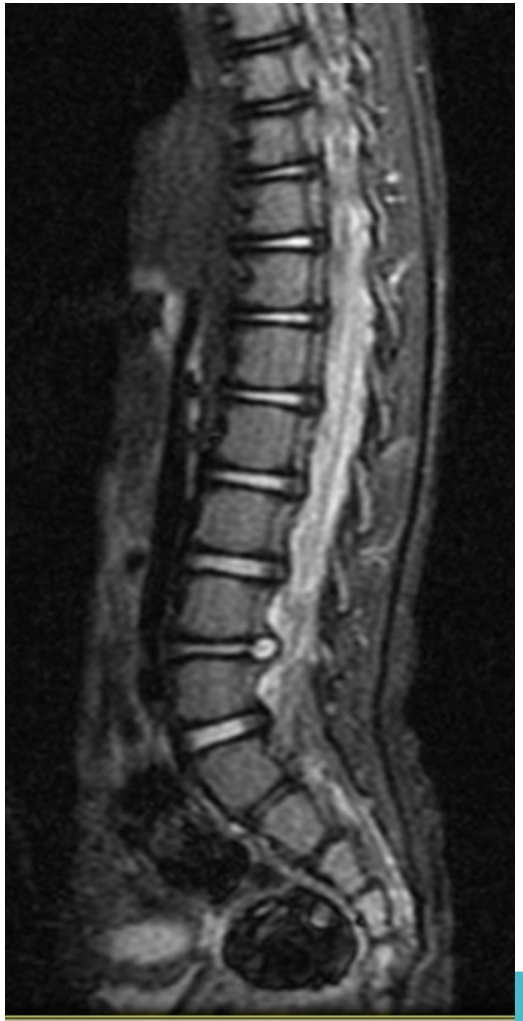
Trial registration: UMIN000036083 / March 12, 2019.

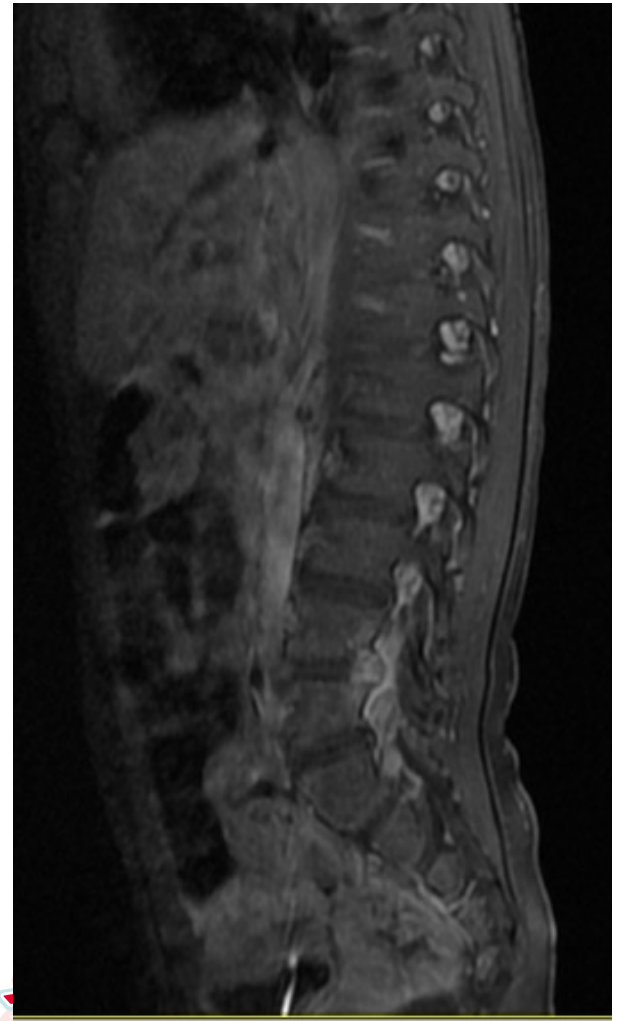
Keywords: Group a streptococcus, *Streptococcus pyogenes*, Amoxicillin, Pharyngitis, Bacterial load, Quantification

CASO CLÍNICO 3: Evolución

- Llaman de microbiología que en el hemocultivo crece *S. aureus* meticilín-sensible
- Se contacta con la familia
- Persistencia de la fiebre con decaimiento y afectación del estado general. Total 7 días de fiebre
- Irritable casi continuamente muy afectada, no quiere quedarse en la cuna. No lesiones en la piel

PREGUNTA 3: ¿Cómo interpretas los resultados de las pruebas complementarias?





PREGUNTA 4: ¿Qué tratamiento le ponemos ahora?

J Pediatr (Rio J). 2020;96(S1):58-64

Jornal de Pediatria

www.jped.com.br

REVIEW ARTICLE

Osteoarticular infections in pediatrics☆

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Received 9 July 2019; accepted 4 October 2019
Available online 26 November 2019

Clinical Infectious Diseases

MAJOR ARTICLE

Early Oral Switch to Linezolid for Low-risk Patients With *Staphylococcus aureus* Bloodstream Infections: A Propensity-matched Cohort Study

Rein Willekens,[1,2] Mireia Puig-Asensio,[1,2] Isabel Ruiz-Camps,[1,2] Maria N. Larrosa,[3] Juan J. González-López,[3] Dolors Rodríguez-Pardo,[1,2] Nuria Fernández-Hidalgo,[1,2] Carles Pigrau,[1,2] and Benito Almirante[1,2]

[1]Department of Infectious Diseases, Hospital Universitari Vall d'Hebron, [2]Department of Medicine, Universitat Autònoma de Barcelona, and [3]Department of Microbiology, Hospital Universitari Vall d'Hebron, Barcelona, Spain

Background. Oral switch to linezolid is a promising alternative to standard parenteral therapy (SPT) in *Staphylococcus aureus* bacteremia (SAB).

Methods. We conducted a prospective cohort study of all adult cases of SAB between 2013 and 2017 in a Spanish university hospital. We compared the efficacy, safety, and length of hospital stay of patients receiving SPT and those where SPT was switched to oral linezolid between days 3 and 9 of treatment until completion. We excluded complicated SAB and osteoarticular infections. A k-nearest neighbor algorithm was used for propensity score matching with a 2:1 ratio.

Results. After propensity score matching, we included 45 patients from the linezolid group and 90 patients from the SPT group. Leading SAB sources were catheter related (49.6%), unknown origin (20.0%), and skin and soft tissue (17.0%). We observed no difference in 90-day relapse between the linezolid group and the SPT group (2.2% vs 4.4% respectively; $P = .87$). No statistically significant difference was observed in 30-day all-cause mortality between the linezolid group and the SPT group (2.2% vs 13.3%; $P = .08$). The median length of hospital stay after onset was 8 days in the linezolid group and 19 days in the SPT group ($P < .01$). No drug-related events leading to discontinuation were noted in the linezolid group.

Conclusions. Treatment of SAB in selected low-risk patients with an oral switch to linezolid between days 3 and 9 of treatment until completion yielded similar clinical outcomes as SPT, allowing earlier discharge from the hospital.

Keywords. *S. aureus*; bacteremia; linezolid; oral switch; low-risk patients.

Mensajes para llevarse a casa:

- Pruebas diagnosticas contexto clínico
- Tratamiento faringoamigdalitis estreptocócica penicilina
- Mala evolución: comenzar de nuevo
- Hemocultivo *S. aureus* siempre patológico. Buscar afectación osteoarticular, abscesos, endocarditis…
- Tratamiento de *S. aureus* meticilín-sensible cloxacilina o cefazolina
- Tratamiento oral en infección osteoarticular

CASO CLÍNICO 4

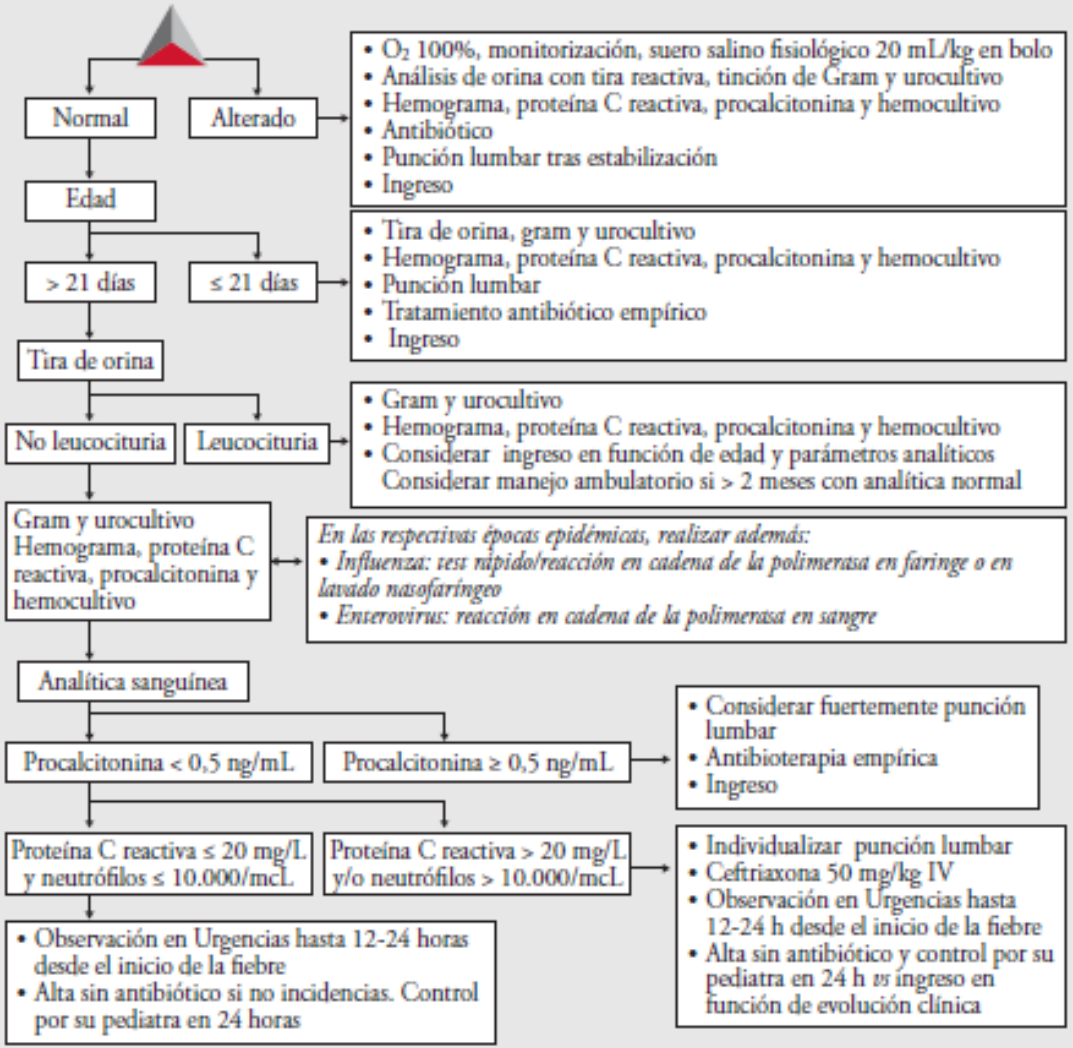
CASO CLÍNICO 4:

Lactante de 1 mes y 2 días de edad que por decaimiento, rechazo de tomas e irritabilidad. Se pasa el día dormido y que cuando se despierta presenta llanto intenso y apenas quiere comer. No otra sintomatología.

AP: Embarazo normal. Parto precipitado. SGB positivo (PAI incompleta, solo 1 dosis). Bolsa rota 2 horas. Resto serologías negativas.

EF: Tª 38,7 rectal, satO2 97%, FC 164 lpm, TA 78/42 mmHg.
Regular estado general, cutis marmorata en contexto de pico febril. Mucosas algo secas. No exantemas. Taquipnea. ACP: normal. ORL sin alteraciones. Hipoactivo e hipotónico, aunque a la estimulación presenta llanto inconsolable.

PREGUNTA 1: ¿Cuál de las siguientes pruebas complementarias no estaría indicada?



NICE guideline

Published: 7 November 2019

www.nice.org.uk/guidance/ng143

Perform lumbar puncture in the following children with fever

all infants aged 1–3 months who appear unwell

CASO CLÍNICO 4: Pruebas complementarias

AS: Hb 10,4 g/dL, Leucocitos 6.100 (1300 neutrófilos, 3.800 linfocitos), Plaquetas 126.000. Glucosa 78 mg/dL, Cr 0,46 mg/dL, Na 145, K 3,6, Cl 111, AST 125, ALT 110, PCR 38 mg/L, PCT muestra insuficiente.

Sedimento urinario (sondaje): 5-10 leucocitos/campo.

Hemocultivo, urocultivo y PCR enterovirus y paraechovirus en plasma: pendientes

Citoquímica LCR: 282 leucocitos (80% mononucleares), 30 hematíes, glucosa 38 mg/L, proteínas 123 mg/dL

Cultivo LCR: gram sin microorganismos. Cultivo y PCRs bacterianas y virales pendientes.

PREGUNTA 2: ¿Qué pauta antibiótica empírica emplearías ahora?

PROTOCOLOS DIAGNÓSTICOS Y TERAPÉUTICOS EN URGENCIAS DE PEDIATRÍA

Sociedad Española de Urgencias de Pediatría (SEUP), 3ª Edición, 2019

11 Lactante febril

Antibioterapia empírica:

– < 3 meses:
- <1 mes: ampicilina (75 mg/kg/6 horas) + cefotaxima (50 mg/kg/6 horas en >7 días y /12 horas en ≤ 7 días) + aciclovir 20 mg/kg/8 horas.
- 1-3 meses: cefotaxima (75 mg/kg y continuar con 50 mg/kg/6 horas) + vancomicina (15 mg/kg/6 horas). Considerar asociar ampicilina (75 mg/kg/6 horas) si alta prevalencia de meningitis por *L. monocytogenes* o enterococcus.

Fever in under 5s: assessment and initial management

NICE guideline

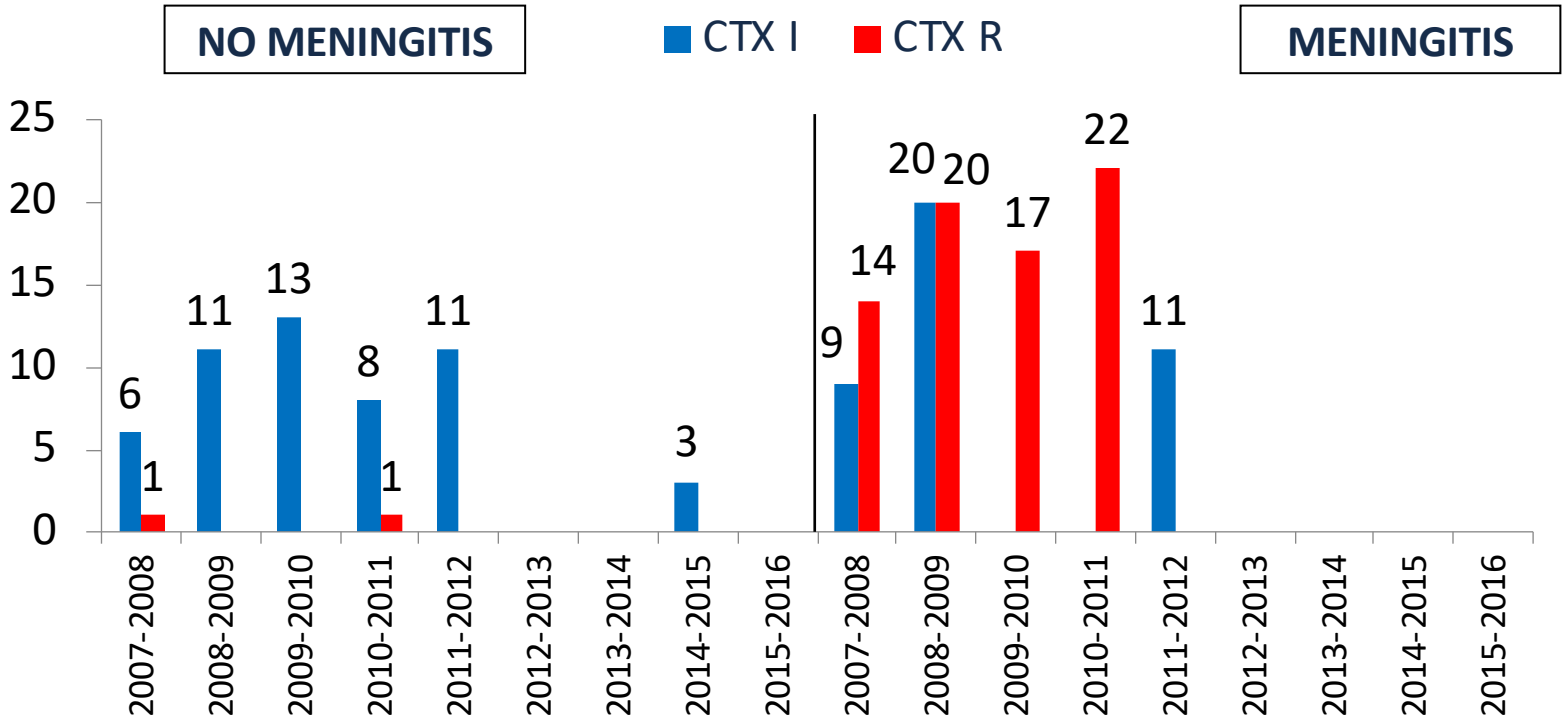
Published: 7 November 2019

www.nice.org.uk/guidance/ng143

1.5.7 When parenteral antibiotics are indicated for infants younger than 3 months of age, a third-generation cephalosporin (for example cefotaxime or ceftriaxone) should be given plus an antibiotic active against listeria (for example, ampicillin or amoxicillin). [2007]

1.4.2 Treat children younger than 3 months with suspected bacterial meningitis without delay using intravenous cefotaxime plus either amoxicillin or ampicillin.

Estudio Heracles: Resistencia Cefotaxima



Juan J. Picazo, Jesús Ruiz-Contreras et al On behalf of Heracles Study Group 1. Impact of 13-valent pneumococcal conjugate vaccination on invasive pneumococcal disease in children under 15 years old in Madrid, Spain, 2007 to 2016:The HERACLES clinical surveillance study

Listeria infection in young infants: results from a national surveillance study in the UK and Ireland

Stefania Vergnano ,[1,2] Gauri Godbole,[3] Ameze Simbo,[3] Alison Smith-Palmer,[4] Martin Cormican,[5] Mark Anthony,[6] Paul T Heath[7]

During the 2-year period, 1 September 2017 to 31 August 2019, 35 cases of Listeria infection were notified, of which 27 fulfilled the case definition (table 1), suggesting an incidence of 1.8 per

All cases but one were identified in the first 24 hours of life, the presenting signs of infants are shown in table 2. The one exception was a neonate with late-onset meningitis who presented on day 14. The median CRP at presentation for all cases was

What this study adds?

- Listeriosis in young infants in the UK and Ireland is confined to the neonatal period.
- The addition of a penicillin for empiric treatment of sepsis and meningitis in young infants is no longer required beyond the neonatal period.

CASO CLÍNICO 4: Evolución

Mientras está pasando la primera dosis de antibiótico, comienza con clonias de extremidad superior derecha que no ceden a pesar de la contención.

Se administra una dosis de fenobarbital iv, pero persisten movimientos que se extienden también a EID. Se administra una dosis de midazolam iv con lo cual cede los movimientos.

Los padres están muy agobiados... Y la enfermera y el residente de urgencias también. Los 4 te preguntan: ¿Y qué hacemos ahora? ¿No se nos estará escapando algo?

PREGUNTA 3: ¿Cuál sería tu actitud en este momento?

HERPES SIMPLEX EN NEONATOS Y LACTANTES:

- Elevada morbimortalidad.
- Infecciones congénitas (intrauterinas) o neonatales (perinatales y postnatales).
- En muchas ocasiones ¡NO ANTECEDENTE MATERNO CONOCIDO!
- 2-3 semanas de vida (hasta las 6 semanas).
- Forma diseminada, más grave. Pueden no tener lesiones cutáneas.
- Valorar aciclovir empírico en neonatos con fiebre, elevación de transaminasas, vesículas cutáneas, letargia, convulsiones, afectación neurológica, pleocitosis LCR, ausencia mejoría con antibioterapia empírica....

Mensajes para llevarse a casa:

- Enterovirus y paraechovirus son causas frecuentes de fiebre sin foco en lactantes menores de 90 días.
- Las infecciones por *Listeria monocytogenes* son muy infrecuentes después del periodo neonatal. Según el contexto clínico, podemos plantearnos no tratar con ampicilina.
- No nos podemos olvidar del herpes simplex en los casos de fiebre sin foco o meningitis en primeras 6 semanas de vida

CASO CLÍNICO 5

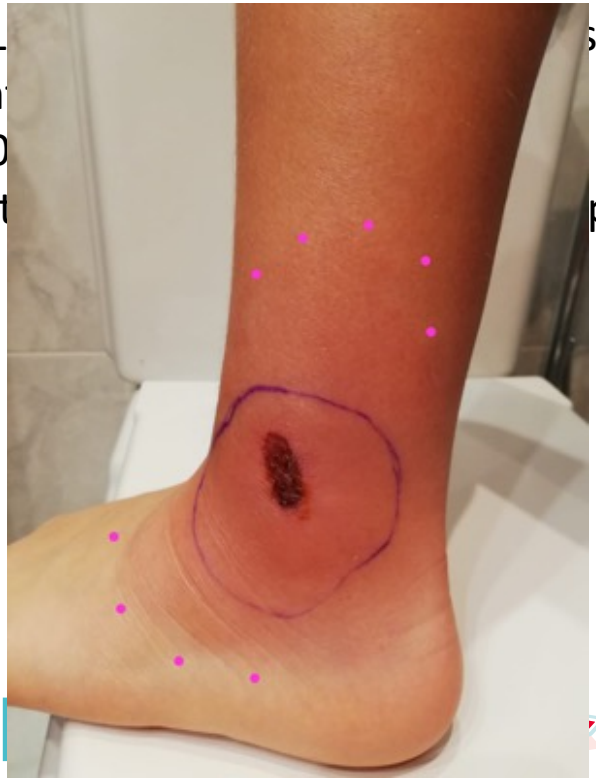
Niña de 7 años de edad que refiere inflamación de pierna y tobillo izquierdo tras picadura de insecto hace 5 días. Afebril. No otra sintomatología. Hace 2 días valorada en su C. Salud, recogieron frotis de exudado (pendiente) e iniciaron tratamiento tópico con mupirocina.

AP: nacida en Lima (Perú). L spaña.

Asma episódica frecuen Seretide 25/125 (1-0-1)

Ingreso en su país en 20

No alergias medicament para su edad



Pregunta 1: ¿Qué tratamiento antibiótico emplearías ahora?

Las cefalosporinas de 1G son casi siempre el tratamiento de elección en l

- (

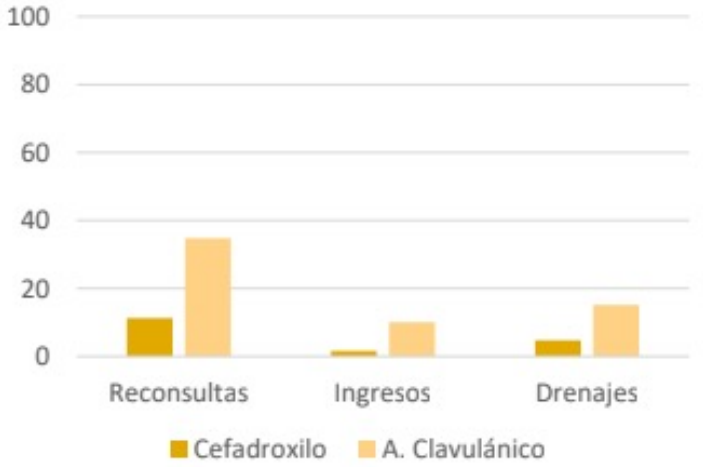
TIPO

Tít

DE PI

Autores
Herranz

Comparación de cefadroxilo vs. Amoxicilina-clavulánico



Menos reconsultas
(11,3% vs 34,8%; p≤0,001)

Menos ingresos
(1,6% vs 10,1%; p≤0,001)

Menos drenajes quirúrgicos
(4,8% vs 15,2%; p≤0,037).

1 paciente precisó cambio a amoxicilina-clavulánico por mala evolución.

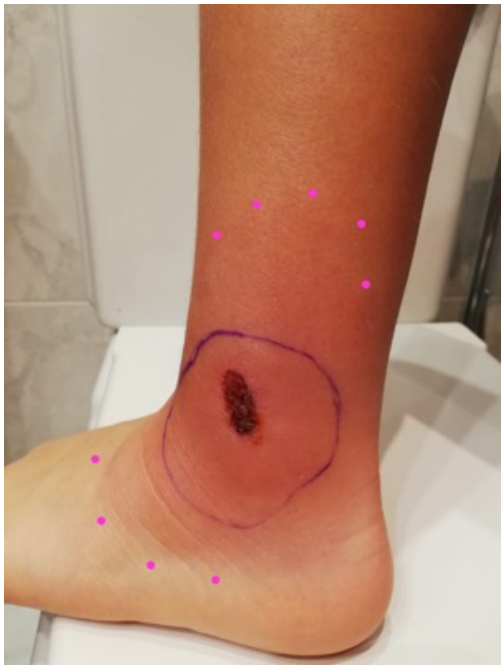
Contactas telefónicamente con la familia a las 48 horas. Te comentan que no ha tenido fiebre y que la inflamación no ha progresado más, pero tampoco ha mejorado. No supuración.

Revisas resultado del frotis:

```
Se aisla
Staphylococcus aureus

Cepa de Staphylococcus aureus RESISTENTE A METICILINA.
```

Amoxicilina/Ácido clavulánico	R
Clindamicina	S
Eritromicina	S
Gentamicina	S
Levofloxacino	S
Linezólido	S
Oxacillina	R
Penicilina	R
Rifampicina	S
Trimethoprim/sulphamethoxazole	S
Vancomicina	S



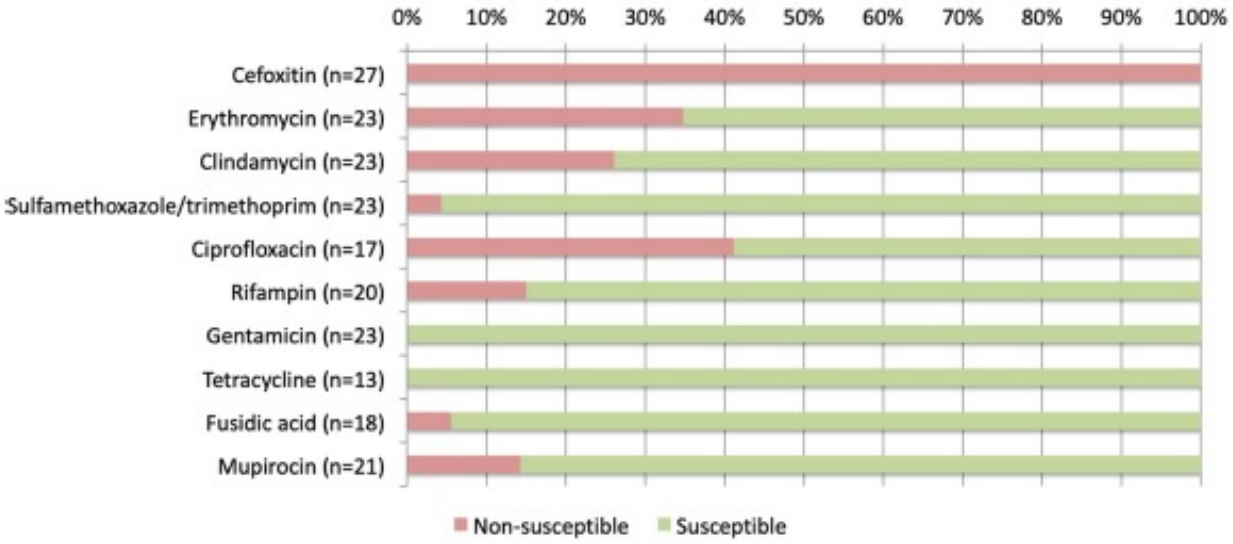
Pregunta 2: ¿Qué tratamiento antibiótico emplearías ahora?

Tratamiento infecciones piel y partes blandas SARM

Open Access Full Text Article

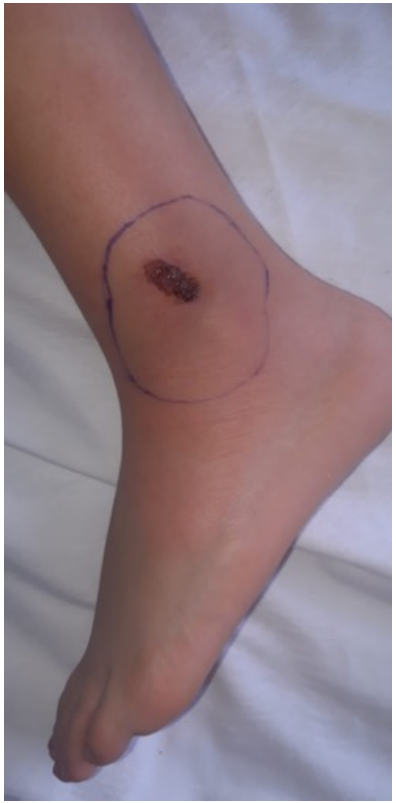
ORIGINAL RESEARCH

Staphylococcus aureus Nasal Colonization in Spanish Children. The COSACO Nationwide Surveillance Study



1876 niños
33% *S.aureus*
1,44% MRSA

Excelente evolución con antibiótico pautado.



Rehistoriando te comentan infecciones recurrentes de la piel desde ingreso, precisando en una ocasión drenaje de absceso.

Hermano mayor y la madre también infecciones cutáneas en los últimos años, también precisando antibiótico oral y drenaje en alguna ocasión.

Niega otros antecedentes de infecciones en la familia. La curva ponderoestatural de ambos hijos es normal. Niegan otra sintomatología asociada

Pregunta 3: ¿Solicitarías algún estudio adicional a la paciente?

La causa más frecuente de infecciones de repetición no son las IDP...

- Colonización por cepas virulentas de *S.aureus* favorece las infecciones, especialmente si comorbilidades predisponentes (dermatitis atópica, inmunosupresión, DM)
- Factores de riesgo: país de procedencia, hospitalizaciones/cirugías frecuentes, portador de dispositivos, etc
- Diagnóstico: frotis nasal, axilar, inguinal, faríngeo... También a convivientes.
- Tratamiento: pauta de descolonización (mupirocina nasal + gel antiséptico)

Mensajes para llevarse a casa:

- El tratamiento con cefalosporinas de 1ªG es eficaz y seguro para IPPB.
- Ante una IPPB que no evoluciona bien con el tratamiento, debemos plantearnos la posibilidad de MRSA.
- Cotrimoxazol es una buena opción de tratamiento oral de IPPB por MRSA dada la baja tasa de resistencias, la buena biodisponibilidad y la formulación en jarabe.
- Sospechar la posibilidad de colonización por MRSA o cepa productora de LPV ante infecciones cutáneas de repetición sobre todo si ocurre en varios miembros de la familia y no hay otros datos sugestivos de IDP.

CASO CLÍNICO 6

CASO CLÍNICO 6:

- Niño de 12 años jugando con el perro de vecina presenta mordedura en la mano derecha
- EF:

  -TEP estable

  -Herida incisa de unos 2 cm en zona interna de la mano derecha sin pérdida de sustancia

- AP sin enfermedades de interés. Correctamente vacunado última dosis de tétanos hace 6 años

Pregunta 1: ¿Qué no harías con este paciente?

Cochrane Library

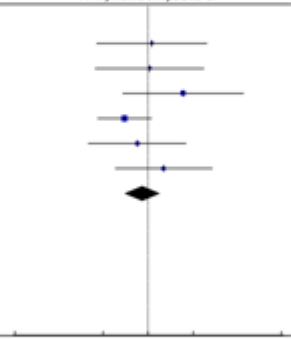
Cochrane Database of Systematic Reviews

Antibiotic prophylaxis for mammalian bites (Review)

Medeiros IM, Saconato H

Analysis 1.1. Comparison 1 Antibiotics prophylaxis for mammalian bites, Outcome 1 Incidence of infection grouped according to type of animal.

Study or subgroup	Treatment n/N	Control n/N	Odds Ratio M-H, Random, 95% CI	Weight	Odds Ratio M-H, Random, 95% CI
1.1.1 Dogs					
Boenning 1983	1/25	1/30		11.19%	1.21[0.07,20.35]
Dire 1992	1/89	1/96		11.38%	1.08[0.07,17.52]
Elenbaas 1982	2/22	0/24		9.93%	5.98[0.27,131.66]
Jones 1985	3/55	8/50		21.8%	0.3[0.08,1.21]
Rosen 1985	1/15	2/18		12.96%	0.57[0.05,7]
Skurka 1986	2/19	1/20		13.07%	2.24[0.19,26.91]
Subtotal (95% CI)	**225**	**238**		**80.33%**	**0.74[0.3,1.85]**
Total events: 10 (Treatment), 13 (Control)					
Heterogeneity: Tau^2=0; Chi^2=4.34, df=5(P=0.5); I^2=0%					
Test for overall effect: Z=0.64(P=0.52)					
1.1.2 Cats					



Authors' conclusions

There is evidence from one trial that prophylactic antibiotics reduces the risk of infection after human bites but confirmatory research is required. There is no evidence that the use of prophylactic antibiotics is effective for cat or dog bites. There is evidence that the use of antibiotic prophylactic after bites of the hand reduces infection but confirmatory research is required.

Comparison 1. Antibiotics prophylaxis for mammalian bites

Outcome or subgroup title	No. of studies	No. of partici-pants	Statistical method	Effect size
1 Incidence of infection grouped according to type of animal	8	522	Odds Ratio (M-H, Random, 95% CI)	0.49 [0.15, 1.58]
1.1 Dogs	6	463	Odds Ratio (M-H, Random, 95% CI)	0.74 [0.30, 1.85]
1.2 Cats	1	11	Odds Ratio (M-H, Random, 95% CI)	0.05 [0.00, 1.34]
1.3 Human	1	48	Odds Ratio (M-H, Random, 95% CI)	0.02 [0.00, 0.33]
2 Incidence of infection grouped according to type of wound	4		Odds Ratio (M-H, Random, 95% CI)	Subtotals only
2.1 Puncture	2	30	Odds Ratio (M-H, Random, 95% CI)	0.22 [0.01, 8.37]
2.2 Lacerations	2	129	Odds Ratio (M-H, Random, 95% CI)	0.80 [0.05, 13.67]
2.3 Avulsions	2	71	Odds Ratio (M-H, Random, 95% CI)	1.07 [0.11, 10.63]
3 Incidence of infection grouped according to site of the wound	4		Odds Ratio (M-H, Random, 95% CI)	Subtotals only
3.1 Trunk	2	32	Odds Ratio (M-H, Random, 95% CI)	1.8 [0.04, 79.42]
3.2 Head/neck	2	82	Odds Ratio (M-H, Random, 95% CI)	0.31 [0.01, 7.77]
3.3 Hands	3	104	Odds Ratio (M-H, Random, 95% CI)	0.10 [0.01, 0.86]
3.4 Arms	1	5	Odds Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]

Child Health Update

Management of dog bites in children

Vikram Sabhaney MD FRCPC Ran D. Goldman MD FRCPC

Abstract

Question A 4-year-old girl was playing with her neighbour's dog. The dog became excited and bit the girl on the forearm, leaving a puncture wound. As a result of the injury, she has presented to my office. Should she be treated with antibiotics? If so, which antibiotic should be used and for how long?

Answer Initiation of prophylactic antibiotics is indicated if the dog bite has undergone primary closure; if there is a moderate or severe bite wound; for puncture wounds (especially if penetration of bone, tendon sheath, or joint), facial bites, bites to the hands or feet, or genital area bites; or wounds sustained by victims who are immunocompromised or asplenic. The first-line choice of antibiotic is amoxicillin-clavulanate. Appropriate tetanus and rabies prophylaxis as indicated should also be a part of caring for a patient who has sustained a dog bite, as well as local debridement and thorough cleaning of the wound.

PEDIATRICS INTERNATIONAL Official Journal of the Japan Pediatric Society

Check for updates

Pediatrics International (2021) **63**, 575–580 doi: 10.1111/ped.14484

Original Article

Dog bite injuries in a tertiary care children's hospital: A seven-year review

Andrea Zangari,[1] Elisabetta Cerigioni,[2] Fabiano Nino,[2] Roberto Guidi,[3] Caterina Gulia,[4] Roberto Piergentili,[5] Michele Ilari,[2] Nadia Mazzoni[3] and Giovanni Cobellis[6]

[1]*Department of Pediatric Surgery, San Camillo-Forlanini Hospital, Roma,* [2]*Pediatric Surgery Unit, Salesi Children's Hospital, Ancona,* [3]*Pediatric Emergency Unit, Salesi Children's Hospital, Ancona,* [4]*Urology Department, Ospedale Misericordia, Grosseto,* [5]*Institute of Molecular Biology and Pathology IBPM, National Research Council, Roma and* [6]*Pediatric Surgery Unit, Marche Polytechnic University, Salesi Children's Hospital, Ancona, Italy*

Abstract

***Background*:** Dog bites are a major cause of traumatic injury in children. The aim of this study was to determine the experience, management, and outcome of dog bite injuries in our department.

***Methods*:** We retrospectively reviewed the clinical records for 127 patients (mean age 7.15 ± 4.24 years, range 1 to 17 years; 68 males) affected by dog-related injuries, from 2012 to 2018. Characteristics of patients and dogs, type and severity of injuries, circumstances of the accidents, treatment and outcome were analyzed.

***Results*:** Of 141 wounds, 73 (51.8%) affected the head and neck, 62 (44%) the limbs, and six (4.2%) affected the trunk. According to the Mcheik classification, 107 lesions (75.9%) were stage 1, 26 (18.4%) stage 2, and eight (5.7%) stage 3. Seventy-eight percent of the cases involved known dogs. The breed of the dog was recorded in 62/127 cases (48.8%) and the most common were mongrels (23/62, 37.1%). Seventy-five percent of the attacks occurred during spring and summer. All patients underwent antibiotic prophylaxis and immediate surgical repair. Wound infection was observed in two patients. Three unsightly scars required rectification, with good cosmetic results in all cases.

***Conclusions*:** Our results are consistent with previous data showing that the typical dog-related injury occurs from a known dog, during spring and summer, and in younger boys, who are frequently exposed to head and neck wounds. Our experience showed the feasibility and safety of primary repair and antibiotic prophylaxis in all patients, with very low incidence of infection and good cosmetic results.

Key words antibiotic prophylaxis, child, dog bite injury, primary repair, surgery.

Tabla 38.4. Pautas de actuación para la profilaxis antitetánica en heridas.

Situación de vacunación	HERIDA LIMPIA[1]	HERIDA TENANÍGENA[2]	
	Vacuna Td	Vacuna Td	IGT[3]
No vacunado, menos de 3 dosis o situación desconocida	1 dosis (completar la pauta de vacunación)	1 dosis (completar la pauta de vacunación)	1 dosis en un lugar diferente de administración
3 o 4 dosis	No necesaria (1 dosis si hace >10 años desde la última dosis)	No necesaria (1 dosis si hace >5 años desde la última dosis)	Solo en heridas de alto riesgo[4]
5 o más dosis	No necesaria	No necesaria (si hace >10 años de la última dosis, valorar la aplicación de 1 única dosis adicional en función del tipo de herida)	Solo en heridas de alto riesgo[4]

Mensajes para llevarse a casa:

- No evidencia de beneficio de uso de profilaxis antibiótica en mordeduras de perro
- Especial indicación en manos, cara y cuello
- Vacuna antitetánica de recuerdo si 3-4 dosis y >5 años de la última dosis
- Inmunodeficientes antibiótico, vacuna y gammaglobulina


OPTICA JOAQUIN ALFORJA