

15^e Congrès SAfW-R

“Le Diabète et ses plaies”



10h45 - 11h15

Traitement antibiotique des plaies infectées du pied diabétique. Nouveautés ? L'avenir? –
Prof Ilker Uçkay, Chef du service des maladies infectieuses, Balgrist U.H. (ZU)

Au théâtre de Beausobre - Cube
Salle Pétra - Avenue de Vertou 2
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Swiss Medical Weekly

Formerly: Schweizerische Medizinische Wochenschrift
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Cite this as: Swiss Med Wkly. 2021;151:w30045

Swiss interdisciplinary guidance on good practices for acute and complicated diabetic foot syndromes

Bettina Peter-Riesch^a, Astrid Czock^b, Ilker Uçkay^c, Interdisciplinary Expert Group on the Diabetic Foot

Version 2023

Guide pratique

pour le traitement optimal du syndrome et des ulcères du pied diabétique aigu (SPD/UPD)

PEDIS-Klassifikation von Infektionen/IDSA

1 – Uninfected	No systemic or local symptoms or signs of infection
2 – Mild infection	<p>Infected:</p> <ul style="list-style-type: none"> At least 2 of the following items are present: <ul style="list-style-type: none"> → Local swelling or induration → Erythema > 0.5 cm* around the wound → Local tenderness or pain → Local warmth → Purulent discharge Other causes of an inflammatory response of the skin should be excluded (e.g., trauma, gout, acute Charcot neuro-osteoarthropathy, fracture, thrombosis, venous stasis) Infection involving only the skin or subcutaneous tissue (without involvement of deeper tissues and without systemic manifestations as described below). Any erythema present extends < 2 cm* around the wound No systemic signs or symptoms of infection (see below)
3 – Moderate infection	<ul style="list-style-type: none"> Infection involving structures deeper than skin and subcutaneous tissues (e.g., bone, joint, tendon, muscle) or erythema extending > 2 cm* from the wound margin. No systemic signs or symptoms of infection (see below)
4 – Severe infection	<p>Any foot infection with the systemic inflammatory response syndrome (SIRS), as manifested by ≥ 2 of following:</p> <ul style="list-style-type: none"> → Temperature > 38° or < 36° Celsius → Heart rate > 90 beats/minute → Respiratory rate > 20 breaths/minute or $\text{PaCO}_2 < 4.3 \text{ kPa (32 mmHg)}$ → White blood cell count > 12,000 or < 4,000/mm³ or > 10 % immature (band) forms

ORGANISATION

Stufe	Red Flags für die Weiterleitung zu einer höheren Stufe
Stufe 1a <i>Gesundheitsdienstleister, die in der Behandlung diabetischer Fussinfektionen nicht geschult sind</i>	<ul style="list-style-type: none"> Jegliche klinischen Anzeichen einer Infektion (IDSA ≥ 2) Schwere Infektion (systemische Reaktion, IDSA 4) → Stufe 3
Stufe 1b <i>Allgemeinmediziner mit Erfahrung in der Behandlung diabetischer Fussinfektionen</i>	<ul style="list-style-type: none"> Milde Infektion (IDSA 2) und keine Anzeichen für eine Wundheilung innerhalb von 14 Tagen trotz angemessener Wundversorgung und Antibiotikabehandlung → Stufe 2 oder 3 Moderate Infektion (Rubor > 2 cm, IDSA 3) → Stufe 2 oder 3 Schwere Infektion (systemische Reaktion, IDSA 4) → Stufe 3
Stufe 2 <i>Spezialisten in der Behandlung diabetischer Fussinfektionen</i>	Schwere Infektion (systemische Reaktion, IDSA 4)
Stufe 3 <i>Interdisziplinäres Fussversorgungsteam</i>	

Note

* In any direction, from the rim of the wound; The presence of clinically significant foot ischemia makes both diagnosis and treatment of infection considerably more difficult.

Referenzen 2 und 3

3 levels of care / emergencies

The **first-level**, single-discipline settings should have an expertise in DFS.

The **second level** consists of a network of experienced clinicians who are able to address the patient to specific care without delay. This requires a network.

The **third level** requires the immediate accessibility of all specialists. Usually, this is a hospital, but does not need to be.

Diabetic Foot Syndrome (DFS) – First Line Management Guidance according to Risk

Pertinent history assessment (see appendix)

Clinical evaluation: Risk-Stratification

→ Signs of Neuropathy?

If yes: is acute Charcot Foot / diabetic neuro-osteoarthropathy possible?

→ follow charcot / offloading guidance and seek expert opinion (Level 2/3 care)

To relief pressure from neuropathic/-angiopathic ulcers refer to Charcot guidance

→ Is there an ulcer / multiple ulcers?

If yes: assess severity according to depth and size (please refer to appendix), photo doc required

→ Suspected Peripheral arterial disease (PAD)? → follow PAD guidance

→ Signs of infection / inflammation? → follow infection guidance

«SIMPLE» low risk	All of: <ul style="list-style-type: none">• Superficial wound (grade 1)• No infection• No arteriopathy (PAD)• No Neuropathy/NP without deformity	Level 1: Primary care
«COMPLEX» intermediate risk	Any of: <ul style="list-style-type: none">• Deep wound (≥ grade 2)• No improvement/worsening• Signs of infection• Arteriopathy (PAD)• Neuropathy with deformity• History of ulcer or amputation	Level 2: DFU Specialists
«EMERGENCY» high risk	Any of: <ul style="list-style-type: none">• Cellulitis• Gangrene• Systemic infection• Acute limb ischemia• Acute Charcot Foot	Level 3: Interprofessional footcare team
Doubt about severity Not confident in evaluation		Refer to Level 2/3



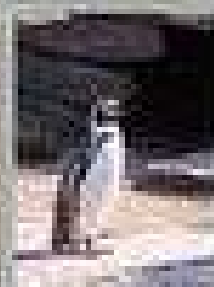
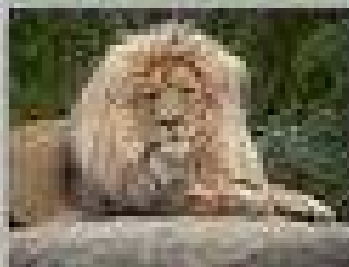
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Société Suisse d'Endocrinologie et de Diabétologie
Società Svizzera d'Endocrinologia e da Diabetologia
Societad Svizra d'Endocrinologia e Diabetologia

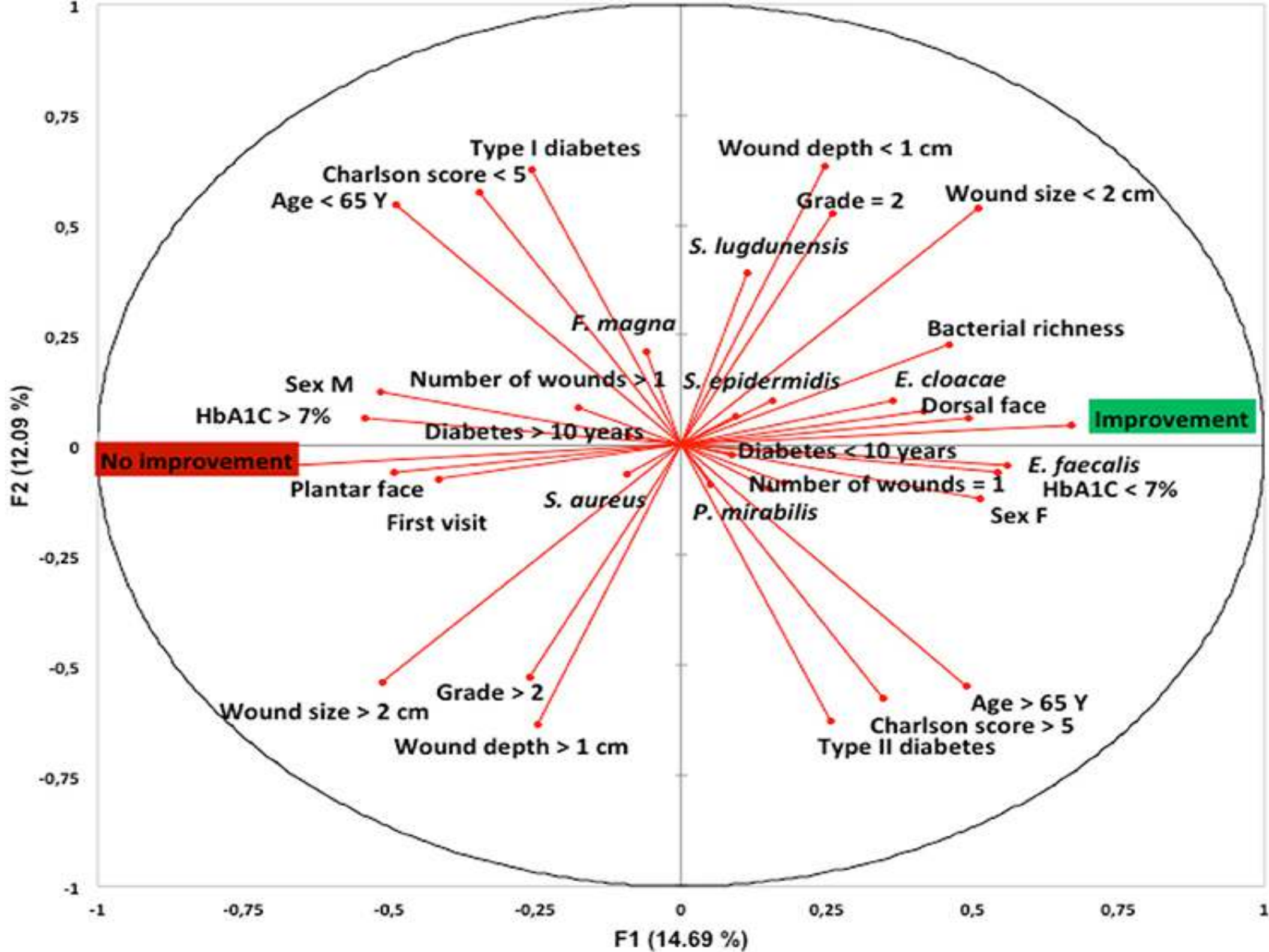
QualiCCare

Umfrage Wund-/Fussprechstunde

1. Wie viele spezialisierte ambulante Einrichtungen zur Behandlung des diabetischen Fuss-Syndroms (geeignete Wundsprechstunden, Fussprechstunden, Fussambulanzen etc.) bestehen Ihrer Kenntnis nach in Ihrer Region (Umkreis bis ca. 25km)?

Anzahl:





Article: Clinical Practice

Does osteomyelitis in the feet of patients with diabetes really recur after surgical treatment? Natural history of a surgical series

J. Aragón-Sánchez¹, J.L. Lázaro-Martínez², C. Hernández-Herrero³, N. Campillo-Vilorio⁴, Y. Quintana-Marrero¹, E. García-Morales² and M.J. Hernández-Herrero¹

¹Diabetic Foot Unit, La Paloma Hospital, Las Palmas de Gran Canaria, ²Diabetic Foot Unit, Complutense University Clinic, Madrid ³Endocrinology Department, University Macarena Hospital, Seville, Spain and ⁴Diabetic Foot Unit, Diabetology Department, Plaza de la Salud General Hospital, Dominican Republic

64 patients: median duration of follow-up was 101.8 weeks

- | | |
|---------------------|-------|
| • Recurrence | 4.6% |
| • Reulceration | 43.0% |
| • New osteomyelitis | 16.9% |



Contents lists available at ScienceDirect

International Journal of Infectious Diseases

journal homepage: www.elsevier.com/locate/ijid

Are antibiotic-resistant pathogens more common in subsequent episodes of diabetic foot infection?



Dan Lebowitz^{a,b,1}, Karim Gariani^{b,c,1}, Benjamin Kressmann^{b,d}, Elodie von Dach^e, Benedikt Huttner^{b,e}, Placido Bartolone^d, Nam Lê^d, Morad Mohamad^d, Benjamin A. Lipsky^{b,f}, Ilker Uçkay^{b,d,e,*}

Table 1

Rates of antibiotic resistance according to the increasing number of episodes of diabetic foot infection.

All pathogens causing DFI, by episode			p-Value ^a
Episode 1	Episode 2	Episode 3	
49%	23%	14%	0.21
53%	25%	11%	0.08
54%	23%	8%	0.38
46%	23%	17%	0.27

DFI, diabetic foot infection.

^a p-Value for trend.

55 diabetic foot infections, surgery 84%

2 microbiological assessments: *On admission, and 1 week later.*

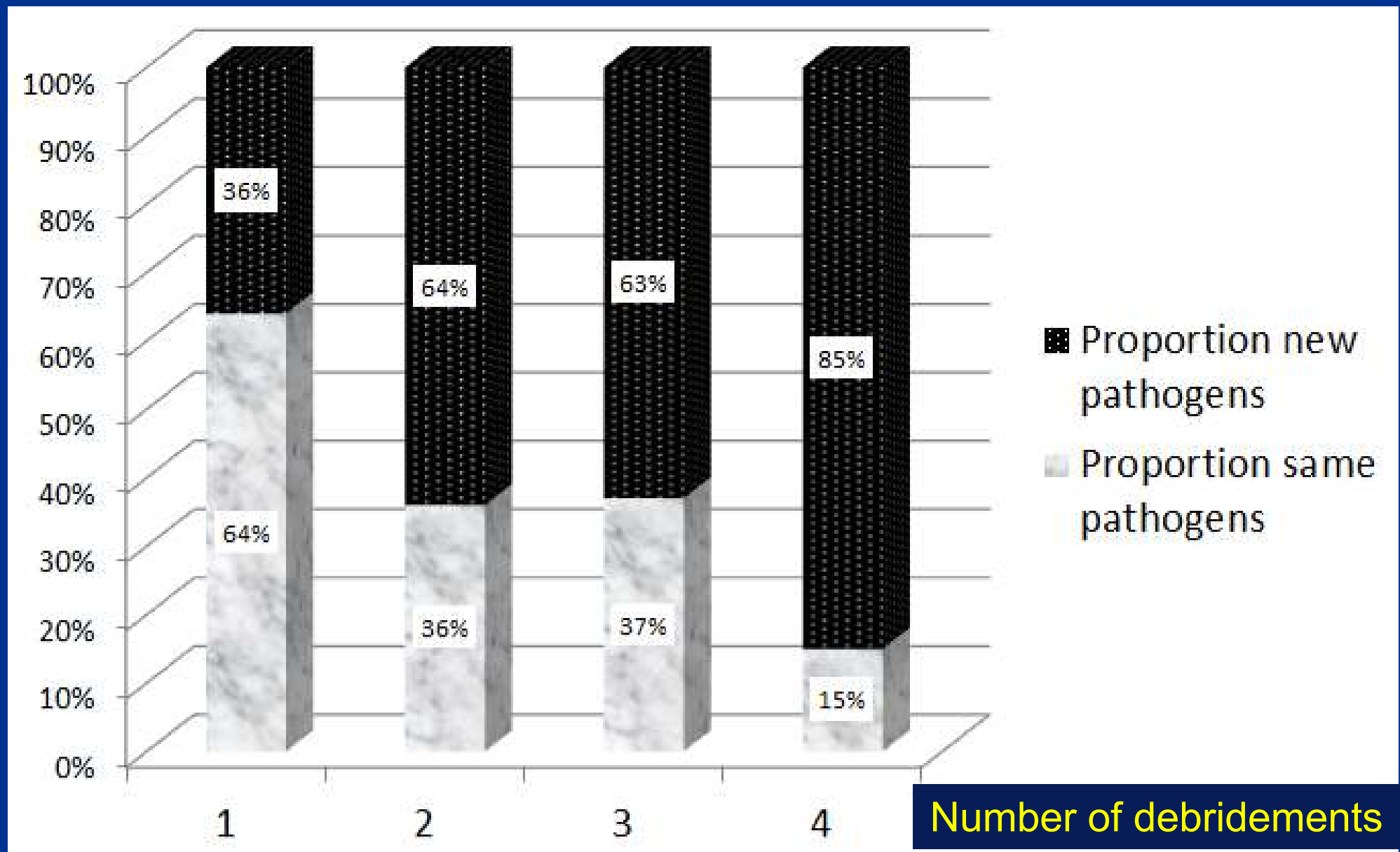
Table 1. First culture showing community acquired infections

Organisms isolated	Frequency (%) (n=55)
Klebsiella	14 (25.5)
E-coli	11 (20)
Enterococci	9 (16.4)
Proteus	4 (7.3)
Staphylococcus aureus	4 (7.3)
Enterobacter	3 (5.5)
Pseudomonas	1 (1.8)
Gram negative cocci	1 (1.8)
Non-fermenting gram neg bacilli	1 (1.8)
No growth	7 (12.7)

Table 3: Second culture showing hospital acquired infections.

Organism isolated	Frequency (%)
Pseudomonas	28 (50.9)
E. coli	8 (14.5)
Proteus	7 (12.7)
Gram positive cocci in pairs	4 (7.3)
Staphylococcus aureus	4 (7.3)
Non-fermenting gram negative bacilli	1 (1.8)
No growth	3 (5.5)

Proportions of « new infections »



ClinicalTrials.gov Protocol Registration and Results System (PRS) Receipt
Release Date: August 12, 2022

ClinicalTrials.gov ID: NCT05502380

Study Identification

Unique Protocol ID: BASEC 2022-00800

Brief Title: Broad-spectrum Antibiotic Prophylaxis in Tumor and Infected Orthopedic Surgery (BAPTIST)

Official Title: Broad-spectrum Antibiotic Prophylaxis in Tumor and Infected Orthopedic Surgery - the Prospective-randomized, Microbiologist-blinded, Stratified, Superiority Trials - BAPTIST Trials

Secondary IDs:

Study Status

Record Verification: August 2022

Overall Status: Not yet recruiting

Study Start: September 15, 2022 [Anticipated]

Primary Completion: December 31, 2023 [Anticipated]

Study Completion: December 31, 2024 [Anticipated]



Principles and practice of antibiotic stewardship in the management of diabetic foot infections

Ilker Uçkay^{a,b}, Martin Berli^b, Parham Sendi^{c,d}, and Benjamin A. Lipsky^{e,f}

Purpose of review

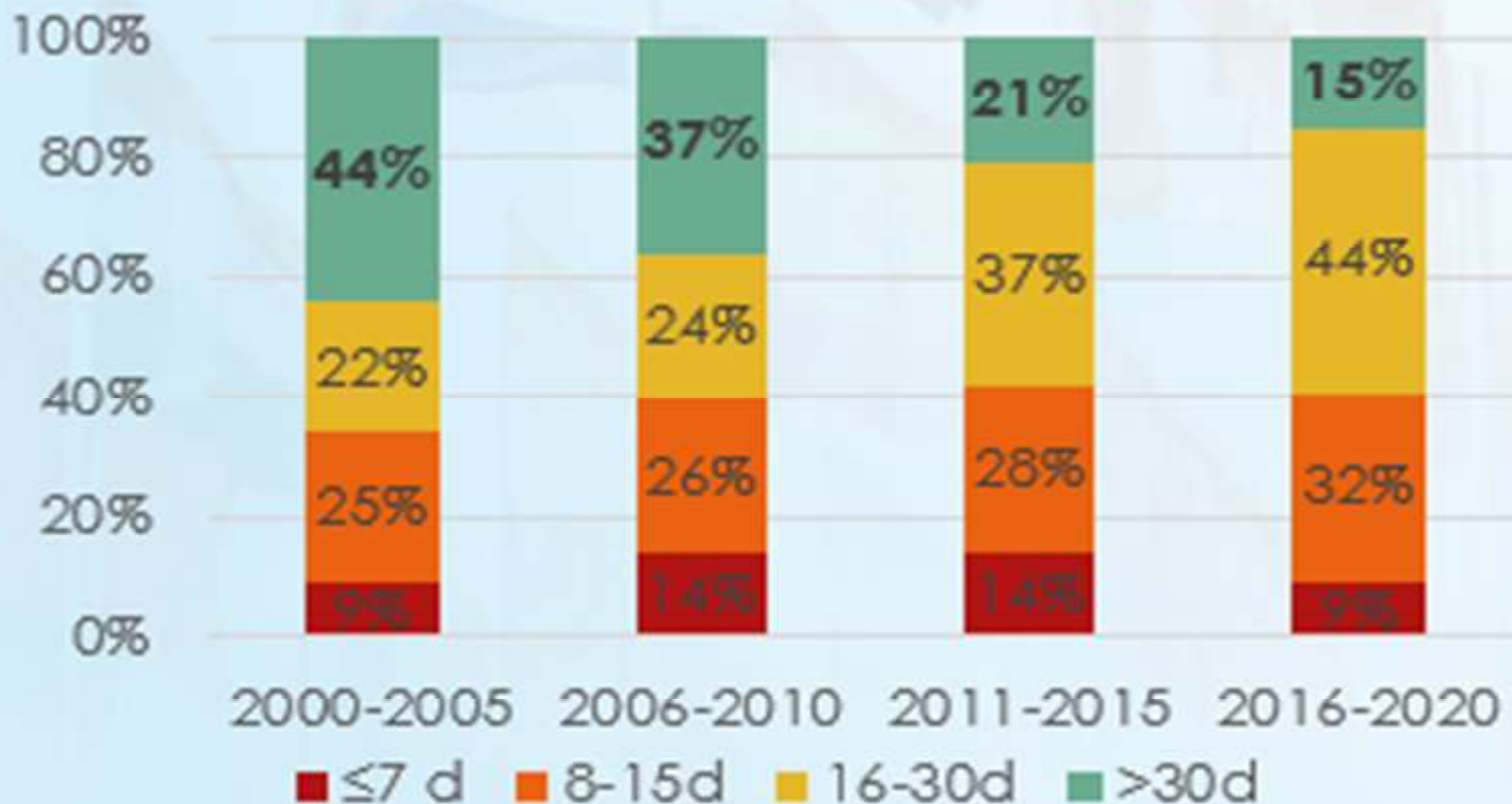
Systemic antibiotic therapy in persons with a diabetic foot infection (DFI) is frequent, increasing the risk of promoting resistance to common pathogens. Applying principles of antibiotic stewardship may help avoid this problem.

Recent findings

We performed a systematic review of the literature, especially seeking recently published studies, for data on the role and value of antibiotic stewardship (especially reducing the spectrum and duration of antibiotic therapy) in community and hospital populations of persons with a DFI.

The long-term impact of "antibiotic stewardship" in diabetic foot infections in two tertiary Swiss centers

Laura Soldevila-Boixader^{1,5*}, Felix WA Waibel², Madlaina Schöni², Karim Gariani³, Dan Lebowitz⁴, Martin Berli², Ilker Uçkay^{2,4,5}



Antibiotiques IV ?




ORIGINAL ARTICLE

Oral versus Intravenous Antibiotics for Bone and Joint Infection

H.-K. Li, I. Rombach, R. Zambellas, A.S. Walker, M.A. McNally, B.L. Atkins, B.A. Lipsky, H.C. Hughes, D. Bose, M. Kümin, C. Scarborough, P.C. Matthews, A.J. Brent, J. Lomas, R. Gundle, M. Rogers, A. Taylor, B. Angus, I. Byren, A.R. Berendt, S. Warren, F.E. Fitzgerald, D.J.F. Mack, S. Hopkins, J. Folb, H.E. Reynolds, E. Moore, J. Marshall, N. Jenkins, C.E. Moran, A.F. Woodhouse, S. Stafford, R.A. Seaton, C. Vallance, C.J. Hemsley, K. Bisnauthsing, J.A.T. Sandoe, I. Aggarwal, S.C. Ellis, D.J. Bunn, R.K. Sutherland, G. Barlow, C. Cooper, C. Geue, N. McMeekin, A.H. Briggs, P. Sendi, E. Khatamzas, T. Wangrangsimakul, T.H.N. Wong, L.K. Barrett, A. Alvand, C.F. Old, J. Bostock, J. Paul, G. Cooke, G.E. Thwaites, P. Bejon, and M. Scarborough, for the OVIVA Trial Collaborators*

BRIEF REPORT

Oral amoxicillin-clavulanate for treating diabetic foot infections

Karim Gariani MD^{1,2} | Dan Lebowitz RN^{1,3} | Benjamin Kressmann RN¹ |
Elodie von Dach RN¹ | Parham Sendi MD^{4,5} | Felix Waibel MD⁶ | Martin Berli MD⁶ |
Tanja Huber PhD⁷ | Benjamin A. Lipsky MD^{1,8} | Ilker Uçkay MD^{1,9} 

¹Service of Infectious Diseases, Geneva University Hospitals, Geneva, Switzerland

²Service of Diabetology and Endocrinology, Geneva University Hospitals, Geneva, Switzerland

³Service of General Internal Medicine, Geneva University Hospitals, Geneva, Switzerland

⁴Department of Infectious Diseases and Hospital Epidemiology, University Hospital Basel, Basel, Switzerland

⁵Department of Orthopaedics and Traumatology, University Hospital Basel, Basel, Switzerland

⁶Orthopaedic Surgery, Balgrist University Hospital, Zurich, Switzerland

⁷Pharmacology, Balgrist University Hospital, Zurich, Switzerland

Aim: To assess amoxicillin-clavulanate (AMC) for the oral therapy of diabetic foot infections (DFIs), especially for diabetic foot osteomyelitis (DFO).

Methods: We performed a retrospective cohort analysis among 794 DFI episodes, including 339 DFO cases.


Results: The median duration of antibiotic therapy after surgical debridement (including partial amputation) was 30 days (DFO, 30 days). Oral AMC was prescribed for a median of 20 days (interquartile range, 12-30 days). The median ratio of oral AMC among the entire antibiotic treatment was 0.9 (interquartile range, 0.7-1.0). After a median follow-up of 3.3 years, 178 DFIs (22%) overall recurred (DFO, 75; 22%). Overall, oral AMC led to 74% remission compared with 79% with other regimens (χ^2 -test; $P = 0.15$). In multivariate analyses and stratified subgroup analyses, oral AMC resulted in similar clinical outcomes to other antimicrobial regimens, when used orally from the start, after an initial parenteral therapy, or when prescribed for DFO.

Conclusions: Oral AMC is a reasonable option when treating patients with DFIs and DFOs.



Article

Timing of Revascularization and Parenteral Antibiotic Treatment Associated with Therapeutic Failures in Ischemic Diabetic Foot Infections

Dominique Altmann ¹, Felix W. A. Waibel ^{2,*} , Gabor Forgo ³ , Alexandru Grigorean ³, Benjamin A. Lipsky ⁴, Ilker Uçkay ⁵  and Madlaina Schöni ²

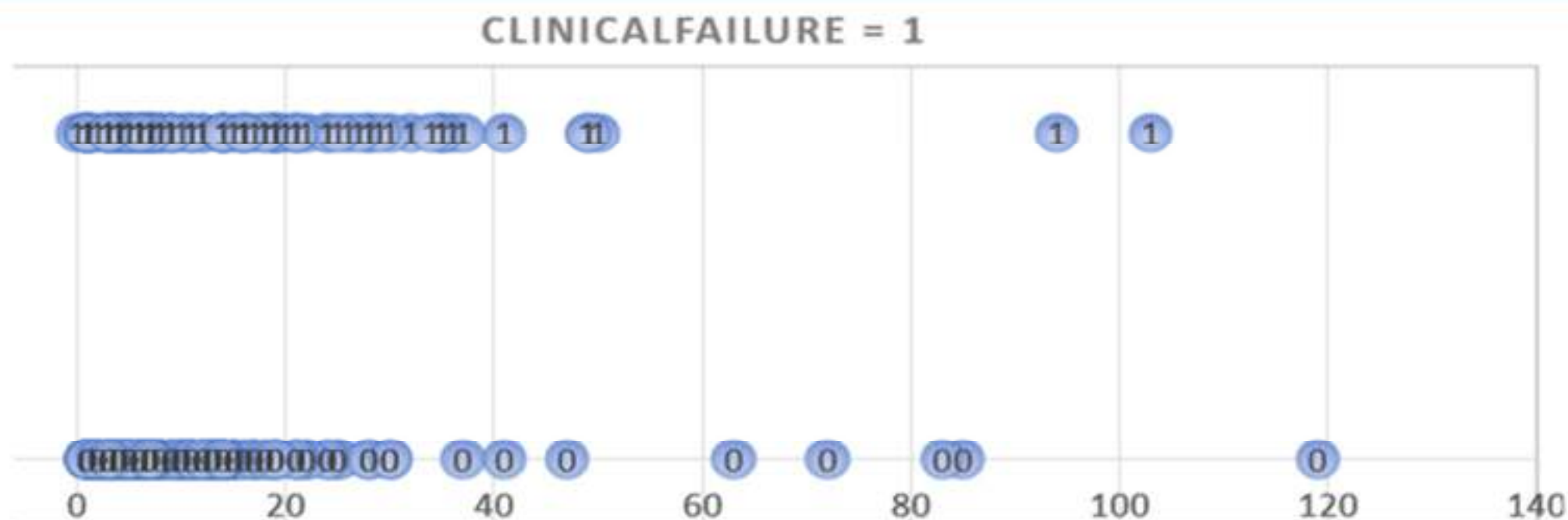



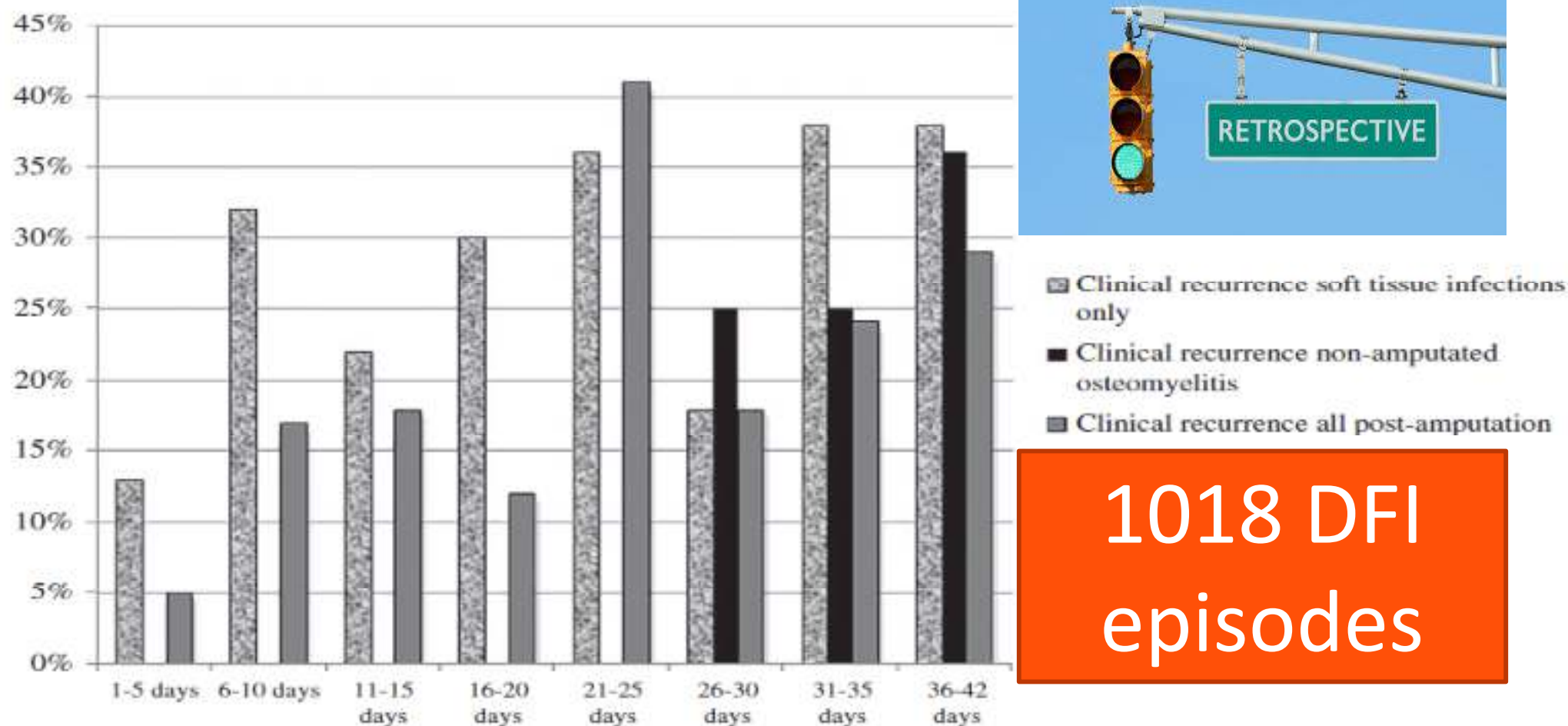
Figure 1. Graphic plotting of the duration of parenteral antibiotic treatment (horizontal axis; in days)

Durée totale des antibiotiques ?



Remission in diabetic foot infections: Duration of antibiotic therapy and other possible associated factors

Karim Gariani MD^{1,2} | Dan Lebowitz MD¹ | Elodie von Dach RN³ |
Benjamin Kressmann RN¹ | Benjamin A. Lipsky MD^{1,4} | Ilker Uçkay MD^{1,3} 



OPEN

Annals of Surgery

DOI: 10.1097/SLA.0000000000005205



Moderate to Severe Soft Tissue Diabetic Foot Infections: A Randomized, Controlled, Pilot Trial of Post-Debridement Antibiotic Treatment for 10 versus 20 days

Truong-Thanh Pham, MD^{1,2*}, Karim Gariani, MD^{3*}, Jean-Christophe Richard, MD², Benjamin Kressmann, RN^{1,2}, François R. Jornayvaz, MD³, Jacques Philippe, MD³, Benjamin A. Lipsky, MD^{1,4}, İlker Uçkay, MD^{1,2,5}

* *equal contribution as first authors*

Pilot study Geneva - (Surgical) soft tissue DFI

<i>n</i> = 66	<u>10 days</u>	<i>p</i> - value	<u>20 days</u>
Age (median)	70 years	0.16	73 years
PAD	63%	0.89	65%
<i>S. aureus</i>	34%	0.65	29%
Gram-negative	29%	0.65	23%
Polymicrobial	43%	0.94	42%
Debridements. (med)	1	0.57	1
Remission	77%	0.57	71%
Adverse events	40%	0.71	35%
- serious AE	17%	0.82	19%
- antibiotic AE	6%	0.31	13%

2017-2019; not published yet



Six-Week Versus Twelve-Week Antibiotic Therapy for Nonsurgically Treated Diabetic Foot Osteomyelitis: A Multicenter Open-Label Controlled Randomized Study

Diabetes Care 2015;38:302–307 | DOI: 10.2337/dc14-1514

Alina Tone,¹ Sophie Nguyen,¹
Fabrice Devermy,² Hélène Topolinski,³
Michel Valette,¹ Marie Cazaubiel,⁴
Armelle Fayard,⁵ Éric Beltrand,⁵
Christine Lemaire,³ and Éric Senneville¹

Table 4—Clinical outcome of 40 diabetic patients with osteomyelitis of the foot treated nonsurgically according to the duration of antibiotic therapy

Patient outcome	6 weeks n = 20	12 weeks n = 20	P
Overall remission	12 (60)	14 (70)	0.50
Complete healing ^a	18 (90)	16 (80)	0.38
Time to complete healing (weeks ± SD)	13.1 ± 12.2	16.8 ± 17.4	0.44
Overall failure	8 (40)	6 (30)	0.50
Noncomplete healing	2 (10)	4 (20)	0.37
Relapsing osteomyelitis	2 (15)	3 (15)	1
Worsening radiological bone abnormalities	6 (30)	4 (20)	0.46
Bone resection	2 (10)	2 (10)	1
Spread of osteomyelitis to contiguous sites	4 (20)	2 (10)	0.37
Major amputation	2 (10)	2 (10)	1

Table 3—Antibiotic-related gastrointestinal adverse events reported in 40 diabetic patients with DFO treated nonsurgically according to the duration of antibiotic therapy

Antibiotic-related adverse events	6 weeks n = 20	12 weeks n = 20
Nausea	1 (5)	2 (10)
Vomiting	1 (5)	2 (10)
Diarrhea	0	2 (10)
Hepatic cytolysis/cholestasis	1 (5)	3 (15)
Total	3 (15)	9 (45) ^a

Data are number of patients (%). ^aP = 0.04.

Clinical Infectious Diseases

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ACCEPTED MANUSCRIPT

Three versus six weeks of antibiotic therapy for diabetic foot osteomyelitis: A prospective, randomized, non-inferiority pilot trial

Karim Gariani, MD, Truong-Thanh Pham, MD, Benjamin Kressmann, RN, François R Jornayvaz, MD, Giacomo Gastaldi, MD, Dimitrios Stafylakis, MD, Jacques Philippe, MD, Benjamin A Lipsky, MD, İlker Uçkay, MD ✉

Clinical Infectious Diseases, ciaa1758, <https://doi.org/10.1093/cid/ciaa1758>

Published: 26 November 2020 **Article history ▼**

Table 1. Characteristics and Outcomes of Subjects With a Diabetic Foot Osteomyelitis Episode, by Duration of Treatment With Systemic Antibiotic Therapy After Debridement (Intention-to-Treat Population) (n = 93)

Characteristic	Duration of Antibiotic Therapy		P Value ^a
	3 Weeks (n = 44)	6 Weeks (n = 49)	
Clinical			
Female sex	6 (14)	11 (22)	.27
Median age	70 years	65 years	.23
Median body mass index	27 kg/m ²	28 kg/m ²	.89
Osteomyelitis involving toe	22 (50)	31 (63)	.20
Charcot midfoot deformities	6 (14)	6 (12)	.84
Clinical peripheral arterial disease	27 (61)	26 (53)	.42
Transcutaneous oxygen tension (dorsal foot), median	36 mm Hg	41 mm Hg	.58
Successful angioplasty performed	4 (9)	4 (8)	.87
Wound score at admission, median	16 points	17 points	.56
Pathogens			
<i>Staphylococcus aureus</i>	21 (48)	23 (47)	.94
Gram-negative bacteria	11 (25)	17 (35)	.31
Polymicrobial infection	20 (45)	28 (57)	.26
Therapy			
No. of surgical debridements, median	1 intervention	1 intervention	.27
Partial amputation	16 (36)	18 (36)	.97
Hyperbaric oxygen therapy	6 (14)	5 (10)	.61
Duration of intravenous therapy, median	1 day	3 days	.37
Outcome			
Complete remission	37 (84)	36 (73)	.21
Microbiological recurrence only	3 (7)	5 (10)	.56
Adverse events	17 (39)	16 (33)	.54
Serious adverse events	5 (11)	9 (18)	.35
Antibiotic-related adverse events	4 (9)	7 (14)	.44
Complete wound healing after therapy	28 (64)	29 (59)	.67

Table 3. Univariate and Multivariate Associations With the Outcome "Clinical Remission" in the Intention-to-Treat and Per-Protocol Populations (Cox Regression Analysis)

Characteristic	Univariate Analysis	Multivariate Analysis
ITT population (n = 93)		
Demographics		
Female sex	0.9 (.5–1.6)	—
Age	1.0 (1.0–1.0)	—
Body mass index	1.0 (.9–1.0)	—
Toe osteomyelitis	1.0 (.6–1.7)	—
Peripheral arterial disease	0.9 (.5–1.5)	—
Ankle-brachial index	0.7 (.2–1.9)	—
Angioplasty	1.4 (.6–3.2)	1.6 (.8–3.2)
Wound score (size) at admission	1.0 (1.0–1.0)	—
Pathogen		
<i>Staphylococcus aureus</i>	1.1 (.7–1.9)	1.4 (.8–2.4)
Gram-negative bacilli	0.9 (.5–1.5)	—
Polymicrobial infection	1.4 (.8–2.3)	—
Therapy		
3-week antibiotic therapy arm	1.0 (.6–1.6)	1.1 (.6–1.7)
Intravenous antibiotic duration	1.0 (1.0–1.0)	1.0 (1.0–1.0)
No. of surgical debridements	1.0 (.8–1.2)	—
Partial amputations	0.7 (.4–1.2)	0.5 (.2–.9) ^a
Adequate patient adherence	0.9 (.5–1.7)	—

n = 460

STUDY PROTOCOL

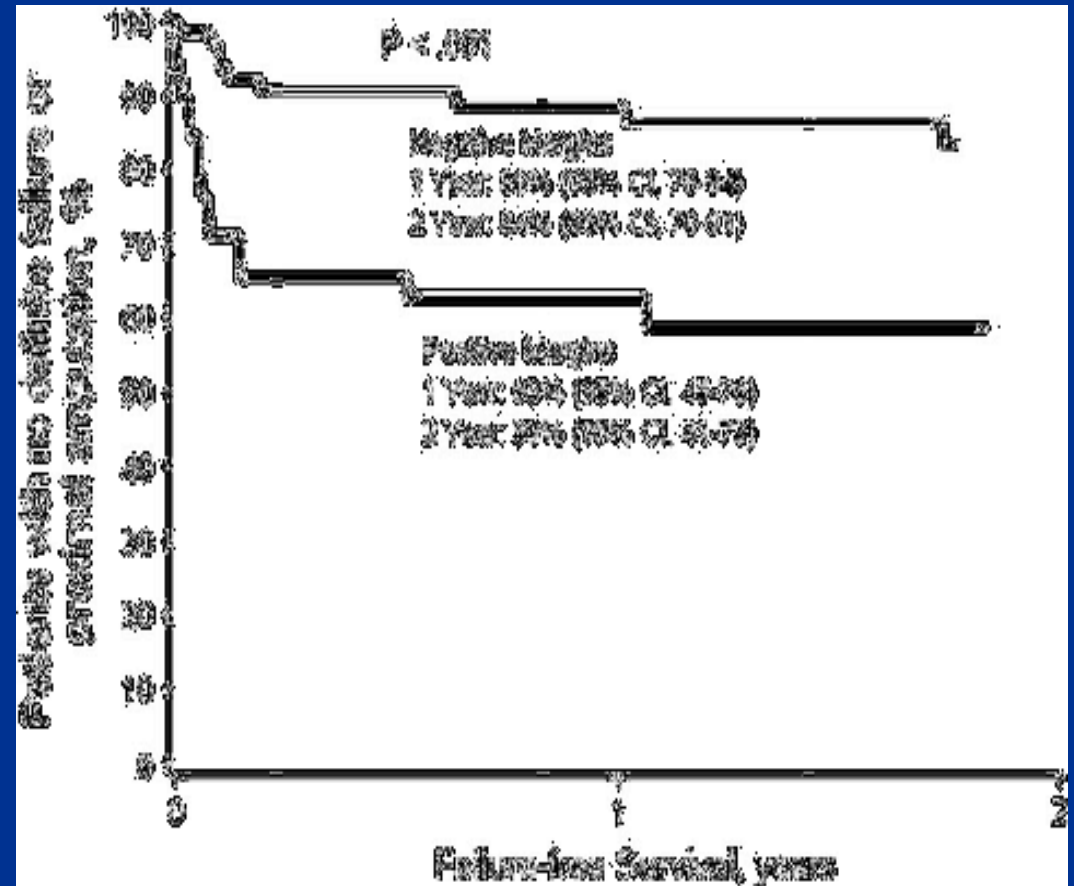
Open Access

Optimization of the antibiotic management of diabetic foot infections: protocol for two randomized controlled trials



Felix Waibel^{1†}, Martin Berli^{1†}, Sabrina Catanzaro², Kati Sairanen², Madlaina Schöni¹, Thomas Böni¹, Jan Burkhard³, Dominique Holy³, Tanja Huber⁴, Maik Bertram⁵, Karin Läubli⁶, Dario Frustaci^{2,7}, Andrea Roskopf⁸, Sander Botter⁷ and Ilker Uçkay^{2,9*} 

Amputation dans le pied diabétique n'exclut pas la persistance d'infection osseuse



Tech-Trials

	Après amputation	TTT conservateur
DFI	1 vs. 4 jours	10 vs. 20 jours
DFO	1 vs. 3 semaines	3 vs. 6 semaines

Interim results

Spring 2022

	Post-Amputation	Conservative treatment
Soft tissue	1 vs. 4 days	10 vs. 20 days
Osteomyelitis	1 vs. 3 weeks	3 vs. 6 weeks

Amputation	long	short	p = 0.60
Remission	47	26	
Revision	5 (10%)	4 (13%)	

Conservative	long	short	p = 0.21
Remission	52	64	
Revision	12 (19%)	8 (11%)	

2nd interim analysis, n = 237 (actually 360)

No significant differences between the groups

In multivariate logistic regression analysis, a short antibiotic duration did not influence overall failure rate (odds ratio 0.8, 95% confidence interval 0.4-1.7).

Results were still underpowered to fulfil non-inferiority (overall 17 difference points [90% confidence interval: 13% to 21%]).

In terms of severe adverse events, short antibiotic regimens yielded as many adverse events than with a long course (4/110 vs. 4/127 adverse events; $p=0.84$).



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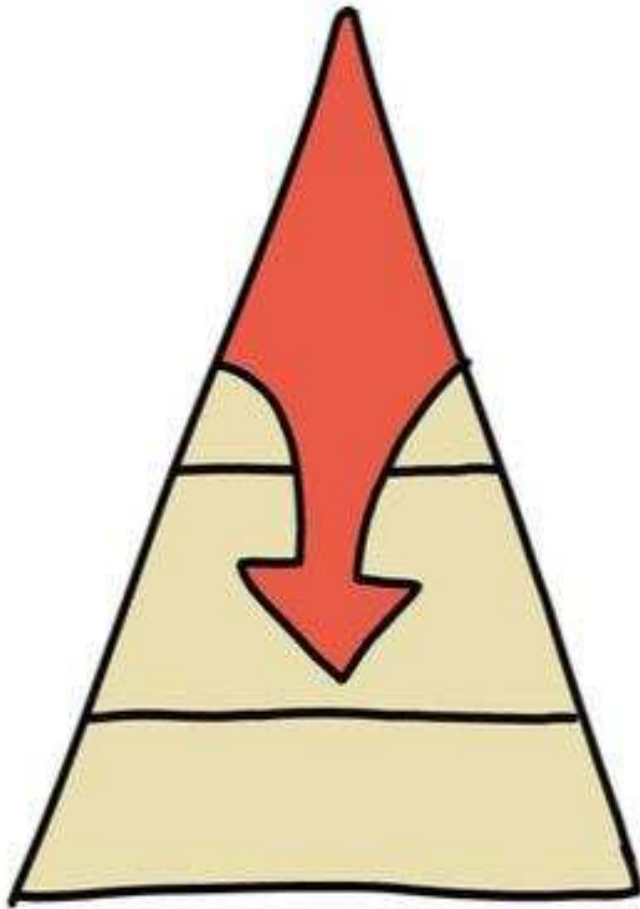
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**Nouveaux
guidelines 2023**

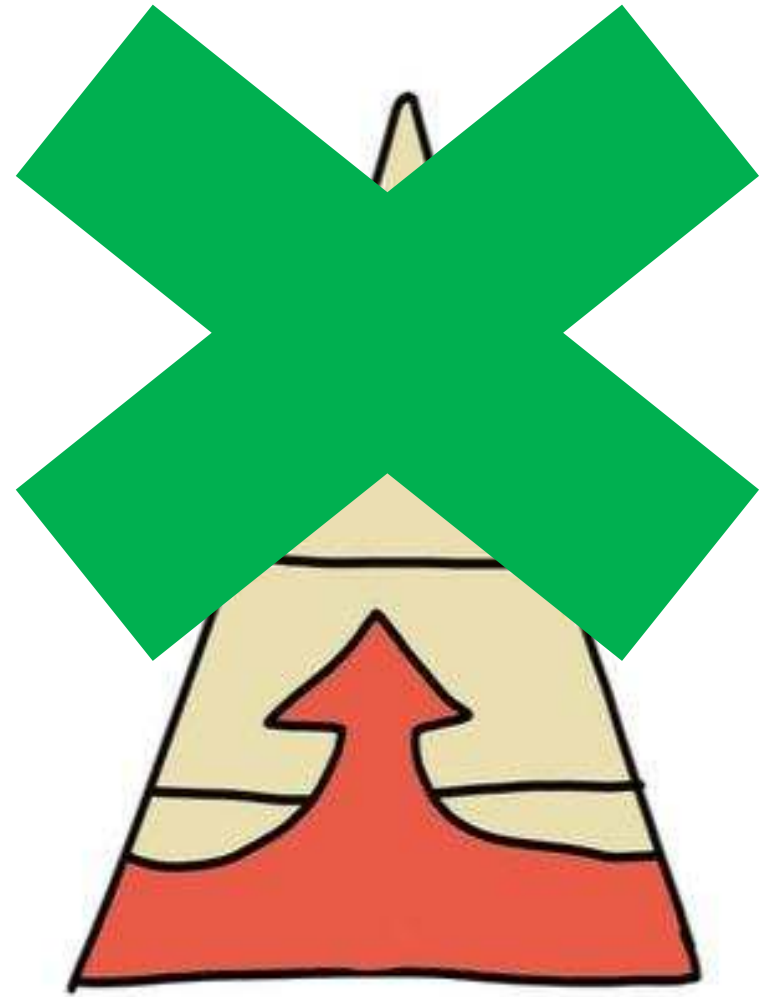
International Working Group on the Diabetic Foot

In 1996 the International Working Group on the Diabetic Foot (IWGDF) was created to develop Guidelines on the prevention and management of diabetic foot complications. These are the only international and multidisciplinary Guidelines that are produced through a rigorous, scientific process undertaken by health professionals and researchers from all over the world. In addition, the IWGDF produces systematic reviews and a summary for daily practice, which are all published in an international scientific journal and on this website.

These Guidelines are adapted for many different countries and they have been translated into most (currently 26) of the major languages of the world. To stay current, the IWGDF Guidelines are updated every 4 years; existing Guidelines are rewritten and new chapters are added under supervision of the IWGDF Editorial Board.



top-down



bottom-up

World guidelines are saying2019

For diabetic foot osteomyelitis cases that initially require parenteral therapy, consider switching to an oral antibiotic regimen that has **high bioavailability after perhaps 5 to 7 days** if the likely or proven pathogens are susceptible to an available oral agent and the patient has no clinical condition precluding oral therapy.
(Weak; moderate)

Choice of systemic antibiotic agents

Treat a person with a diabetic foot infection with an antibiotic agent that has been shown to be effective in a published randomized controlled trial and is appropriate for the individual patient.

Some agents to consider include penicillins, cephalosporins, carbapenems, metronidazole (in combination with other antibiotic[s]), clindamycin, linezolid, daptomycin, quinolones, or vancomycin, but not tigecycline. **(Strong; high)**

IWDGF 2019

Cela commence peu à peu à changer

IWGDF 2023

Moins en intraveineux (pas de condition ferme)

Choix libre d'antibiotiques (aussi bêta-lactames)

Les ostéomyélites ne sont pas toutes pareilles

- 3 semaines après résection partielle

Recommandation 15

We suggest a duration of up to 3 weeks of antibiotic therapy after amputation for diabetic foot osteomyelitis and positive bone margin culture and 6 weeks for diabetic foot osteomyelitis without bone resection or amputation.

Antibiotiques topiques SANS antibiotiques systémiques

«Antibiotic stewardship» et approches multidisciplinaires +++

Swiss Working Group (2019)

Diabetic Foot Infection: Treatment

Issue	Action
4. Antibiotics 2	<ul style="list-style-type: none">- Duration of treatment<ul style="list-style-type: none">A. Soft tissue infection<ul style="list-style-type: none">• Mild: 5-7 days or dependent on clinical course• Moderate: 7-14 days or dependent on clinical course• Severe: 12-20 days or dependent on clinical courseB. Osteomyelitis<ul style="list-style-type: none">• 4-6 weeks if no resection of infected bone• 2-6 weeks if residual infected (but viable) bone after resection• 0-1 week if no residual infected tissue after resection (eg postamputation)

Osteomyelitis

Daniel P Lew, Francis A Waldvogel

Bone and joint infections are painful for patients and frustrating for both them and their doctors. The high success rates of antimicrobial therapy in most infectious diseases have not yet been achieved in bone and joint infections owing to the physiological and anatomical characteristics of bone. The key to successful management is early diagnosis, including bone sampling for microbiological and pathological examination to allow targeted and long-lasting antimicrobial therapy. The various types of osteomyelitis require differing medical and surgical therapeutic strategies. These types include, in order of decreasing frequency: osteomyelitis secondary to a contiguous focus of infection (after trauma, surgery, or insertion of a joint prosthesis); that secondary to vascular insufficiency (in diabetic foot infections); or that of haematogenous origin. Chronic osteomyelitis is associated with avascular necrosis of bone and formation of sequestrum (dead bone), and surgical debridement is necessary for cure in addition to antibiotic therapy. By contrast, acute osteomyelitis can respond to antibiotics alone. Generally, a multidisciplinary approach is required for success, involving expertise in orthopaedic surgery, infectious diseases, and plastic surgery, as well as vascular surgery, particularly for complex cases with soft-tissue loss.

Lancet 2004; 364: 369–79

Services of Infectious Diseases and Medicine 2, Department of Internal Medicine, Geneva University Hospitals, Geneva, Switzerland (Prof D P Lew MD, Prof F A Waldvogel MD)

Correspondence to:
Prof Daniel P Lew, Service of Infectious Diseases, Department of Internal Medicine, Geneva University Hospitals, 24 Rue Micheli-du-Crêt, 1211 Geneva 14, Switzerland
Daniel.Lew@hcuge.ch

Standard: 4 - 6 semaines

2012 Infectious Diseases Society of America Clinical Practice Guideline for the Diagnosis and Treatment of Diabetic Foot Infections^a

Benjamin A. Lipsky,¹ Anthony R. Berendt,² Paul B. Cornia,³ James C. Pile,⁴ Edgar J. G. Peters,⁵ David G. Armstrong,⁶ H. Gunner Deery,⁷ John M. Embil,⁸ Warren S. Joseph,⁹ Adolf W. Karchmer,¹⁰ Michael S. Pinzur,¹¹ and Eric Senneville¹²

¹Department of Medicine, University of Washington, Veterans Affairs Puget Sound Health Care System, Seattle; ²Bone Infection Unit, Nuffield Orthopaedic Centre, Oxford University Hospitals NHS Trust, Oxford; ³Department of Medicine, University of Washington, Veteran Affairs Puget Sound Health Care System, Seattle; ⁴Divisions of Hospital Medicine and Infectious Diseases, MetroHealth Medical Center, Cleveland, Ohio; ⁵Department of Internal Medicine, VU University Medical Center, Amsterdam, The Netherlands; ⁶Southern Arizona Limb Salvage Alliance, Department of Surgery, University of Arizona, Tucson; ⁷Northern Michigan Infectious Diseases, Petoskey; ⁸Department of Medicine, University of Manitoba, Winnipeg, Canada; ⁹Division of Podiatric Surgery, Department of Surgery, Roxborough Memorial Hospital, Philadelphia, Pennsylvania; ¹⁰Department of Medicine, Division of Infectious Diseases, Beth Israel Deaconess Medical Center, Harvard Medical School, Boston, Massachusetts; ¹¹Department of Orthopaedic Surgery and Rehabilitation, Loyola University Medical Center, Maywood, Illinois; and ¹²Department of Infectious Diseases, Dron Hospital, Tourcoing, France

DFO: 4 - 6 semaines

ORIGINAL ARTICLE

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& Metabolism Open Access

Stopping antibiotics after surgical amputation in diabetic foot and ankle infections—A daily practice cohort

Anne Rossel^{1,2} | Dan Lebowitz^{1,2} | Karim Gariani^{1,2,3} | Mohamed Abbas^{2,4} |
Benjamin Kressmann^{2,5,6} | Mathieu Assal^{5,7} | Philippe Tscholl^{5,6,8} |
Dimitrios Stafylakis^{5,6} | Ilker Uçkay^{2,4,5,6,8} 

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Surgery without postoperative antibiotic treatment in diabetic foot osteomyelitis is not associated with recurrence or limb loss

Javier Aragón-Sánchez^{a,*}, Gerardo Viquez-Molina^b, María Eugenia López-Valverde^c,
Cristina Aragón-Hernández^d, José María Rojas-Bonilla^b

