

8. Balgrist Symposium zum Diabetischen Fuss:

Was gibt es Neues in der Behandlung?



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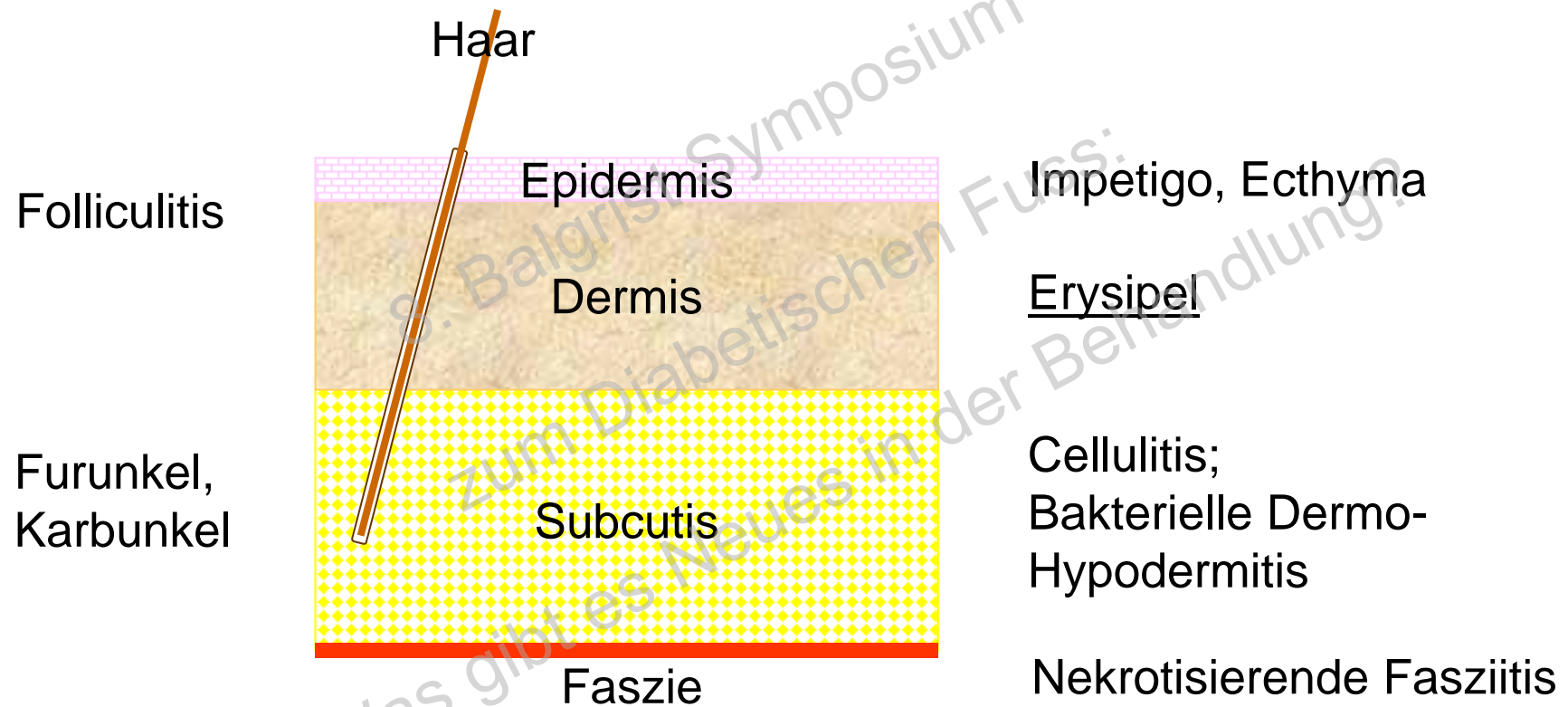
Was tun beim Erysipel ?

juerg.hafner@usz.ch

Freitag, 8. November 2019

	Wundbehandlung	
08.00	Neue Behandlungsmethoden / Material	Richner
08.20	Was tun, wenn der Fuss rot wird? Alarmzeichen beim Diabetiker	Burkhard
08.40	Was tun beim Erysipel? Hauterkrankungen beim Diabetiker	Hafner
09.00	Infekte beim Diabetischen Fuss	Uçkay
09.20	Der diabetische Fuss im Zentrum interdisziplinärer Zusammenarbeit	Schöni

Bakterielle Hautinfektionen





Impetigo contagiosa

- Staph. aureus
- β -hämolyt. Streptokokken GA



Oberflächlich:

Papeln / Pusteln / Bläschen

- Erosionen mit gelben Krusten

Variante:

- Impetigo bullosa
- Staphylococcal scalded skin s.
- Exfoliatives Toxin A, B

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Erysipel

- β -hämolys. Streptokokken GA



Klinik:

- Scharf begrenzte, hellrote Plaque,
- erhabener, zentrifugal progr. Rand,
- Lymphangitis / Lymphadenitis
- Erst-Infektion: Allgemein-Symptome
- Rezidiv-Infektion: Kaum AZ ↘

Superantigene: TNFa, IL1, IL6 ↗

- Allg.Symptome, Exantheme, etc.



Ecthyma

- β -hämolyt. Streptokokken GA (=Streptococcus pyogenes)
- Staph. aureus
 - lokale Toxine
 - Katalase
 - Hyaluronidase

Klinik:

Ausgestanzte Ulzera

Entzündliche Umgebungsreaktion



Cellulitis

- b-hämolyt. Streptokokken GA
- Staph. Aureus
- PA, Gram-neg., Anaerobier

Klinik:

- Unscharf begrenzte livide Plaque
- Kaum Lymphangitis / AZ m

Ungünstiger Verlauf:

- Abszedierung
- Sepsis



Nekrotisierende Faszitis



- β -hämolyt. Streptokokken GA
- Staph. aureus, Enterokokken
- E.coli, Pseudomonas
- Bacteroides

Klinik:

- Erythem, Oedem, Schmerz
- Rasche Progredienz:
- Livide Plaques > Nekrosen



Lebensbedrohlich! MRI!

- Debridement, Antibiotikatherapie

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2 Voraussetzungen für ein Erysipel:

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2 Voraussetzungen für ein Erysipel:

Schwellung (Lymphödem, Abhängigkeitsödem, ...)



2 Voraussetzungen für ein Erysipel:

Schwellung (Lymphödem, Abhängigkeitsödem, ...)

Eintrittspforte (Hautverletzung)



[Erysipelas and lymphedema--egg or hen?].

[Article in German]

Stöberl C, Partsch H.

Abstract

The initial lymphatics and peripheral lymph-collectors of both legs of 16 patients were visualized by means of indirect lymphography, after the patients had undergone a rash of erysipelas on their lower extremities. 14 out of 19 legs showed clinical signs of lymphedema after one or several erysipelas. In 16 out of 19 legs after erysipelas, but also in 6 out of 11 healthy contralateral extremities, we found pathological initial lymphatics and changes in size, irregularities of the course, and pathological stops of peripheral lymph-collectors. These findings indicate that in the majority of the patients with erysipelas--contrary to the common opinion--resulting lymphedema should not be termed as secondary. In fact, they are primary lymphedemas deteriorated by erysipelas, with the typical pathological findings in indirect lymphography, as they are seen in simple primary forms.

Br J Dermatol. 2008 Jun;158(6):1210-5. doi: 10.1111/j.1365-2133.2008.08503.x. Epub 2008 Mar 20.

Erysipelas as a sign of subclinical primary lymphoedema: a prospective quantitative scintigraphic study of 40 patients with unilateral erysipelas of the leg.

Damstra RJ¹, van Steensel MA, Boomsma JH, Nelemans P, Veraart JC.

Author information

- 1 Department of Dermatology, Phlebology and Lymphology, Nij Smellinghe Hospital, 9202 NN Drachen, The Netherlands.
r.damstra@nijsmellinghe.nl

CONCLUSIONS: Erysipelas is often presumed to be purely infectious in origin, with a high rate of recurrence and a risk of persistent swelling due to secondary lymphoedema. In this study, we show that patients presenting with a first episode of erysipelas often have signs of pre-existing lymphatic impairment in the other, clinically nonaffected, leg. This means that subclinical lymphatic dysfunction of both legs may be an important predisposing factor. Therefore, we recommend that treatment of erysipelas should focus not only on the infection but also on the lymphological aspects, and long-standing treatment for lymphoedema is essential in order to prevent recurrence of erysipelas and aggravation of the pre-existing lymphatic impairment. Our study may change the clinical and therapeutic approach to erysipelas as well as our understanding of its aetiology.

BMJ. 1999 Jun 12;318(7198):1591-4.

Risk factors for erysipelas of the leg (cellulitis): case-control study.

Dupuy A¹, Benchikhi H, Roujeau JC, Bernard P, Vaillant L, Chosidow O, Sassolas B, Guillaume JC, Grob JJ, Bastuji-Garin S.

Author information

1 Dermatology Department, Hôpital Henri Mondor, 94010 Créteil, France.

Abstract

OBJECTIVE: To assess risk factors for erysipelas of the leg (cellulitis).

DESIGN: Case-control study.

SETTING: 7 hospital centres in France.

SUBJECTS: 167 patients admitted to hospital for erysipelas of the leg and 294 controls.

RESULTS: In multivariate analysis, a disruption of the cutaneous barrier (leg ulcer, wound, fissurated toe-web intertrigo, pressure ulcer, or leg dermatosis) (odds ratio 23.8, 95% confidence interval 10.7 to 52.5), lymphoedema (71.2, 5.6 to 908), venous insufficiency (2.9, 1.0 to 8.7), leg oedema (2.5, 1.2 to 5.1) and being overweight (2.0, 1.1 to 3.7) were independently associated with erysipelas of the leg. No association was observed with diabetes, alcohol, or smoking. Population attributable risk for toe-web intertrigo was 61%.

CONCLUSION: This first case-control study highlights the major role of local risk factors (mainly lymphoedema and site of entry) in erysipelas of the leg. From a public health perspective, detecting and treating toe-web intertrigo should be evaluated in the secondary prevention of erysipelas of the leg.

Erysipel beim Diabetiker

- A Diabetes ein Risikofaktor?
- B Pilzinfektionen ein Risikofaktor?
- C Therapie per os oder intravenös?
- D Kompression beim akuten Erysipel?
- E Antibiotika-Dauerprophylaxe?

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E Antibiotika-Dauerprophylaxe?

Examination of hospital length of stay in Canada among patients with acute bacterial skin and skin structure infection caused by methicillin-resistant *Staphylococcus aureus*.

Potashman MH¹, Stokes M², Liu J², Lawrence R¹, Harris L¹.

Author information

- 1 Global Health Outcomes, Merck & Co, Inc., Kenilworth, NJ, USA.
- 2 Evidera, Lexington, MA, USA.

Abstract

PURPOSE: Skin infections, particularly those caused by resistant pathogens, represent a clinical burden. Hospitalization associated with acute bacterial skin and skin structure infections (ABSSSI) caused by methicillin-resistant *Staphylococcus aureus* (MRSA) is a major contributor to the economic burden of the disease. This study was conducted to provide current, real-world data on hospitalization patterns for patients with ABSSSI caused by MRSA across multiple geographic regions in Canada.

PATIENTS AND METHODS: This retrospective cohort study evaluated length of stay (LOS) for hospitalized patients with ABSSSI due to MRSA diagnosis across four Canadian geographic regions using the Discharge Abstract Database. Patients with ICD-10-CA diagnosis consistent with ABSSSI caused by MRSA between January 2008 and December 2014 were selected and assigned a primary or secondary diagnosis based on a prespecified ICD-10-CA code algorithm.

RESULTS: Among 6,719 patients, 3,273 (48.7%) and 3,446 (51.3%) had a primary and secondary diagnosis respectively. Among patients with a primary or secondary diagnosis, the cellulitis/erysipelas subtype was most common. The majority of patients presented with 0 or 1 comorbid condition; the most common comorbidity was diabetes. The mean LOS over the study period varied by geographic region and year; in 2014 (the most recent year analyzed), LOS ranged from 7.7 days in Ontario to 13.4 days in the Canadian Prairie for a primary diagnosis and from 18.2 days in Ontario to 25.2 days in Atlantic Canada for a secondary diagnosis. A secondary diagnosis was associated with higher rates of continuing care compared with a primary diagnosis (10.6%-24.2% vs 4.6%-12.1%).

CONCLUSION: This study demonstrated that the mean LOS associated with ABSSSI due to MRSA in Canada was minimally 7 days. Clinical management strategies, including medication management, which might facilitate hospital discharge, have the potential to reduce hospital LOS and related economic burden associated with ABSSSI caused by MRSA.

KEYWORDS: ABSSSI; Canadian provinces; LOS; MRSA; hospital outcomes; time trends

Epidemiological data and comorbidities of 428 patients hospitalized with erysipelas.

Pereira de Godoy JM¹, Galacini Massari P, Yoshino Rosinha M, Marinelli Brandão R, Foroni Casas AL.

Author information

- 1 Cardiology and Cardiovascular Surgery, Department of the Medicine School, São José do Rio Preto-FAMERP, Sao Paulo, Brazil.
godoyjmp@riopreto.com.br

Abstract

The aim of this study was to evaluate the epidemiological data and the main comorbidities of patients with erysipelas admitted to a tertiary hospital. All patients admitted due to erysipelas during the period from 1999 to 2008 were included in a prospective and cross-sectional study. The Fisher exact test and logistic regression were used for statistical analysis. A total of 428 individuals were hospitalized with 41 rehospitalizations; 51.17% of the patients were women, the mean age was 58.6 years. The main comorbidities were hypertension (51.6%), diabetes mellitus (41.6%), chronic venous insufficiency (36.2%), other cardiovascular diseases (33.2%) including angina, peripheral arterial insufficiency, acute myocardial infarction, and strokes, obesity (12.1%), chronic renal failure (6.8%), neoplasms (4.9%), cirrhosis (4.9%), chronic lymphedema (4.2%), and leg ulcers (2.6%). Erysipelas is a seasonal disease that affects adults and the elderly people, has a repetitive nature, and is associated with comorbidities.

zum Diabetisforum
Was gibt es Neues in der Behandlung?

Epidemiology and comorbidity of erysipelas in primary care.

Bartholomeeusen S¹, Vandenbroucke J, Truyers C, Buntinx F.

Author information

1 Department of General Practice, Katholieke Universiteit Leuven, Belgium. stefaan.bartholomeeusen@med.kuleuven.be

Abstract

BACKGROUND/AIMS: Most studies on the epidemiology of erysipelas are done in hospitals, resulting in patient selection. The aim of this study is to determine epidemiological characteristics and comorbidity of erysipelas based on primary care data.

METHODS: Incidence rate study and nested case-control study. A database containing data from 52 general practices in Flanders, Belgium, with morbidity data on 160,000 different patients in the period 1994-2004. Excess comorbidity was determined in patients with erysipelas in 2004.

RESULTS: In the period 1994-2004, the age-standardized incidence of erysipelas increased significantly from 1.88 (95% confidence interval, CI, 1.62-2.13) per 1,000 patients to 2.49 (95% CI 2.24-2.74). Of patients with erysipelas, 16% had one or more recurrences. Local factors such as dermatophytosis, chronic ulcer of the skin, varicose veins of the leg and phlebitis and general disorders such as obesity, **non-insulin-dependent diabetes** and heart failure increased the risk of erysipelas.

CONCLUSION: The incidence of erysipelas increased from 1994 to 2004. More attention should be paid to local factors such as dermatophytosis to prevent erysipelas.

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Determinants of severity for superficial cellulitis (erysipelas) of the leg: a retrospective study.

Musette P¹, Benichou J, Noblesse I, Hellot MF, Carvalho P, Young P, Levesque H, Courtois H, Caron F, Lauret P, Joly P.

Author information

1 Department of Dermatology and INSERM Unit 539, Charles Nicolle University Hospital, 1 rue de Germont 76031, Rouen, France.

Abstract

BACKGROUND: Superficial cellulitis (erysipelas) of the leg is a frequent infectious disease with a favorable outcome, whereas some patients present a serious disease. The determinants of severity for superficial cellulitis (erysipelas) of the leg have not yet been clearly established. In order to determine the characteristics of patients presenting with severe superficial cellulitis of the leg, we analyzed patients with favorable and unfavorable outcome.

METHODS: The records of 167 patients referred to Rouen University Hospital for non-superficial cellulitis of the leg were analyzed. Two severity groups of patients were retrospectively defined. Patients in the severe group either died secondary to infection during hospital stay or were hospitalized for a duration at least equal to the 90th percentile (i.e., >21 days of hospitalization). The remaining patients were considered as presenting with non-severe cellulitis. Potential determinants of severity were analyzed by univariate and multivariate analysis based on logistic regression.

RESULTS: From univariate analysis, the following general factors were positively associated with severity: advanced age, arterial hypertension, diabetes mellitus, elevated leukocytosis, and elevated neutrophilia. The local factors associated with severity were ulcer of the leg and arteriosclerosis obliterans of the leg. From multivariate analysis, only age ($P=0.004$), diabetes mellitus ($P=0.01$), and leukocytosis ($P=0.04$) appeared to be independently associated with severity. A close to significant association was also found with arteriosclerosis obliterans of the leg ($P=0.07$). Whereas general complications occurred more frequently in the severe group, no such difference was observed for local complications.

CONCLUSIONS: Determinants of severity for superficial cellulitis of the leg include high age and associated medical conditions. Aged patients and patients with diabetes mellitus, elevated leukocytosis, or possibly arteriosclerosis obliterans of the leg should preferably be hospitalized for specific care of associated conditions to avoid the occurrence of general complications.

Risk factors for erysipelas of the leg (cellulitis): case-control study.

Dupuy A¹, Benchikhi H, Roujeau JC, Bernard P, Vaillant L, Chosidow O, Sassolas B, Guillaume JC, Grob JJ, Bastuji-Garin S.

Author information

1 Dermatology Department, Hôpital Henri Mondor, 94010 Créteil, France.

Abstract

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DESIGN: Case-control study.

SETTING: 7 hospital centres in France.

SUBJECTS: 167 patients admitted to hospital for erysipelas of the leg and 294 controls.

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CONCLUSION: This first case-control study highlights the major role of local risk factors (mainly lymphoedema and site of entry) in erysipelas of the leg. From a public health perspective, detecting and treating toe-web intertrigo should be evaluated in the secondary prevention of erysipelas of the leg.

Zusammenfassung:

Diabetes ist wahrscheinlich ein RF für Erysipel.

Lokale Faktoren wie Ödem und Eintrittspforte sind wichtiger.

Diabetes kann zu schwereren und längeren Infektionen führen.

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A Diabetes ein Risikofaktor?

B Pilzinfektionen ein Risikofaktor?

C Therapie per os oder intravenös?

D Kompression beim akuten Erysipel?

E Antibiotika-Dauerprophylaxe?

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Zustand nach Phenolisierung (unblutige Methode)

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[Hospitalization criteria for erysipelas: prospective study in 145 cases].

[Article in French]

Jégo J¹, Hansmann Y, Chalot F, Roger M, Faivre B, Granel F, Scrivener Y, Cairey-Remonnay S, Bernard P.

Author information

¹ Service de Dermatologie, Hôpital R. Debré, Reims, France.

Abstract

INTRODUCTION: Two recent studies conducted in France among general practitioners have shown that they only hospitalized between 20 to 50 percent of patients with erysipelas seen in private practice. We therefore conducted a hospital-based, prospective study designed to determine the hospitalization criteria for erysipelas, since a number of patients are also hospitalized directly through the emergency department.

PATIENTS AND METHODS: This prospective, hospital-based study, included patients hospitalized for clinical diagnosis of erysipelas in 9 centres in north-eastern France. Clinical data were recorded using a standard questionnaire filled-in during the first 72 hours of hospitalization. They included: demographic (name and first name initials, age, sex) and clinical (location of erysipelas) characteristics, as well as the origin of the patient (home, emergency department, other department), the reasons for hospitalization (severity of local or systemic signs, suspicion of deep vein thrombosis, location on the face, age over 60 years, associated diseases, absence of improvement after ambulatory treatment, socioeconomic reasons or on principle hospitalization). Patients hospitalized by (or without) a general practitioner were compared using Chi-2 and Student t tests.

RESULTS: One hundred forty-five adults (80 women and 65 men; mean age 61 +/- 20 years) were included in the study: 89 patients (61 p. 100) were hospitalized by a general practitioner whereas 56 (39 percent) went directly to the emergency department. In 128/145 cases (88 p. 100), erysipelas was localized on the lower limbs. The mean number of reasons for hospitalization per patient was of 2.2 +/- 1.2. The most frequent reason for hospitalization was an associated disease (diabetes, obesity, alcoholism, immunodeficiency) present in 77 cases (53 p. 100). Patients hospitalized through a general practitioner were older than those hospitalized directly through the emergency department (68 vs 51 years; $p < 0.001$). Patients hospitalized by a general practitioner more frequently had an erysipelas located on the lower limbs (94 p. 100 vs 79 p. 100; $p < 0.001$) and the mean number of reasons for hospitalization was greater (2.4 vs 1.7; $p < 0.001$), especially suspicion of deep vein thrombosis and elevated mean age. The treatment started during hospitalization was intravenous penicillin G in 67 cases (46 p. 100) oral pristinamycin in 28 cases (19 p. 100) and intravenous or oral amoxicillin in 9 cases (6 p. 100).

COMMENTS: This study demonstrates the existence of two distinct courses of hospitalization for erysipelas. Patients hospitalized by a general practitioner were older and their erysipelas more frequently located on the lower limbs and deep vein thrombosis was suspected. Our study also shows the emergence of a population of patients younger and without medical supervision, for whom the general practitioner is replaced by the emergency department of the local hospital. Nevertheless, the most frequent reason for hospitalization in both groups is the existence of an associated disease, possibly responsible for further complications.

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Die Behauptung, Kompressionstherapie sei beim Erysipel kontraindiziert, ist falsch.

Sobald die Antibiotikatherapie wirkt (2 h i/v), kann unterpolstert und komprimiert werden.

Diese Behauptung ist allerdings ebf. empirisch.

Randomisierte kontrollierte Studie fehlt (noch).

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Antibiotika-Dauerprophylaxe

Penicillin-Tabletten (Penicillin V), täglich

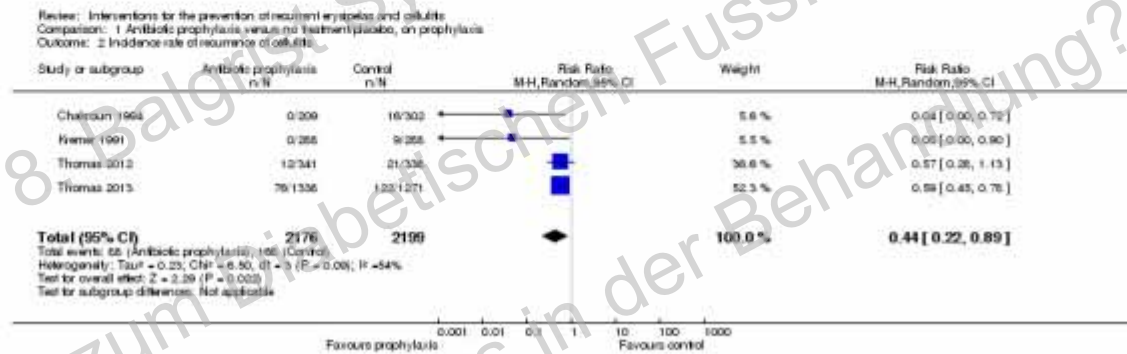
Benzathin-Penicillin i/m (lang wirksam, 3-wö)

Erythromycin-Tabletten, täglich

Clindamycin (Dalacin)-Tabletten, täglich

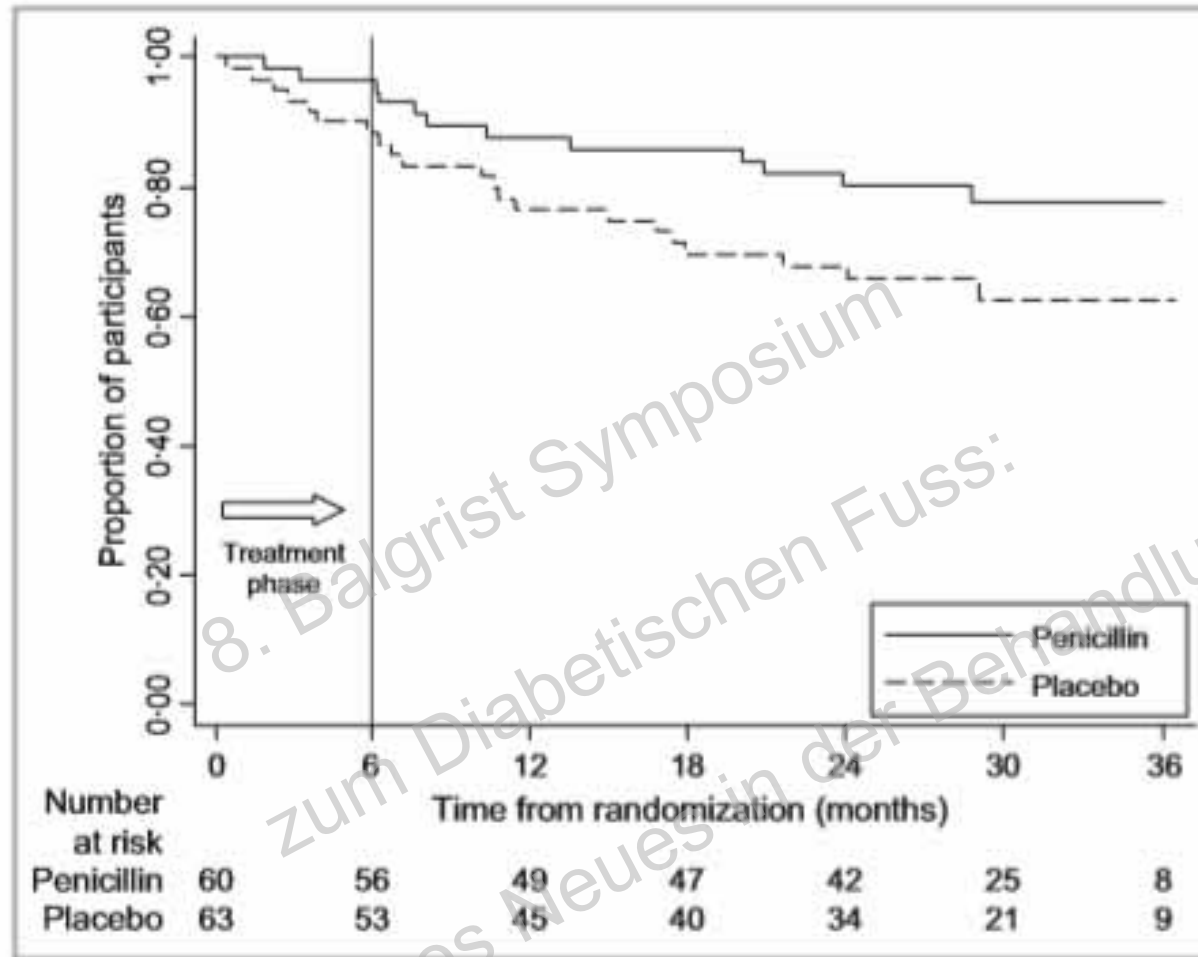
8. Bakterien-Symposium
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Analysis 1.2



Comparison 1 Antibiotic prophylaxis versus no treatment/placebo, on prophylaxis, Outcome 2 Incidence rate of recurrent

The protective effects of antibiotic did not last after prophylaxis had been stopped ('post-prophylaxis') for risk of cellulitis recurrence (RR 0.88, 95% CI 0.59 to 1.31; two studies; n = 287; P = 0.52), incidence rate of cellulitis (RR 0.94, 95% CI 0.65 to 1.36; two studies; n = 287; P = 0.74), and rate until next episode of cellulitis (HR 0.78, 95% CI 0.39 to 1.56; two studies; n = 287). Evidence was of low certainty.



Penicillin V (Ospen) 250 mg 1 – 0 – 1

Thomas K et al.: Br J Dermatol 2012;166(1):169-178

Antibiotikaprophylaxe:

Zeit gewinnen, um Lymphödem zu verbessern

Zeit gewinnen, bis Eintrittspforte abgeheilt ist

Sobald beendet, wieder Rückfallgefahr

→ Ödem «definitiv» verbessern

→ Eintrittspforten «definitiv» verschliessen

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Danke!

juerg.hafner@usz.ch

