K u t a n e s å r

DDS - Munkebjerg 2023

midt
regionmidtjylland

Rikke Bech, overlæge, Ph.D.
Karsten Fogh, overlæge, dr. med.
Aarhus Universitetshospital

Forbruger undersøgelse

- Hvor mange har indenfor den seneste måned håndteret sår?
- Er der nogen, der i deres praksis slet ikke håndterer sår?

Håndtering af arterielle og venøse sår

- **Hvem gør hvad?**

Venøs insufficiens:

- Ødem
- Staseeksem
- Hyperpigmentering
- Lipodermatosclerose
- Atrophia blanche
- Sår fra malleoler
  og proximalt.

Hvem gør hvad?

Arteriel insufficiens:

- **Claudicatio**
- **Smerter**
- **Huden rød / bleg**
- **Pulsforhold**
- **Nedsat capillærrespons**
- **Nedsat tå- og ankeltryk**
- **Sår fra malleoler**
  og distalt.

Hvem gør hvad?

IMMUNOLOGISKE SÅR

Ikke venøse sår
Ikke arterielle sår
Ikke diabetes sår
Ikke cancer sår
Ikke decubitus

men:
* **vasculitis**
* **pyoderma gangraenosom**
(* **andre).**

PYODERMA GANGRÆNOSUM

Autoinflammatorisk proces

Neutrofilt infiltrat i dermis

Pathergi

Lokal behandlig med topikalt steroid eller Protopic.

Fugtig sårheling og kompression

Systemisk behandling: Første valg Prednisolon,

Ciclosporin, TNFalfa hæmmer, evt. IL-1 hæmmer

JAMA Dermatology | Consensus Statement

Diagnostic Criteria of Ulcerative Pyoderma Gangrenosum
A Delphi Consensus of International Experts

Emanual Maverakis, MD; Chelsea Ma, MD; Kanade Shinkai, MD, PhD; David Fiorentino, MD, PhD; Jeffrey P. Callen, MD; Uwe Wollina, MD; Angelo Valerio Marzano, MD; Daniel Wallach, MD; Kyoungmi Kim, PhD; Courtney Schadt, MD; Anthony Ormerod, MD; Maxwell A. Fung, MD; Andrea Steel, BA; Forum Patel, MD; Rosie Qin, MD; Fiona Craig, MRCP; Hywel C. Williams, DSc; Frank Powell, FRCPI; Alexander Merleev, PhD; Michelle Y. Cheng, MD

IMPORTANCE Pyoderma gangrenosum is a rare inflammatory skin condition that is difficult to diagnose. Currently, it is a "diagnosis of exclusion," a definition not compatible with clinical decision making or inclusion for clinical trials.

Editorial
Related article
Supplemental conter

….”Diagnosis of exclusion”, a definition not compatible with clinical decision making or inclusion for clinical trials

ASSOCIEREDE TILSTANDE

Inflammatorisk tarmsygdom

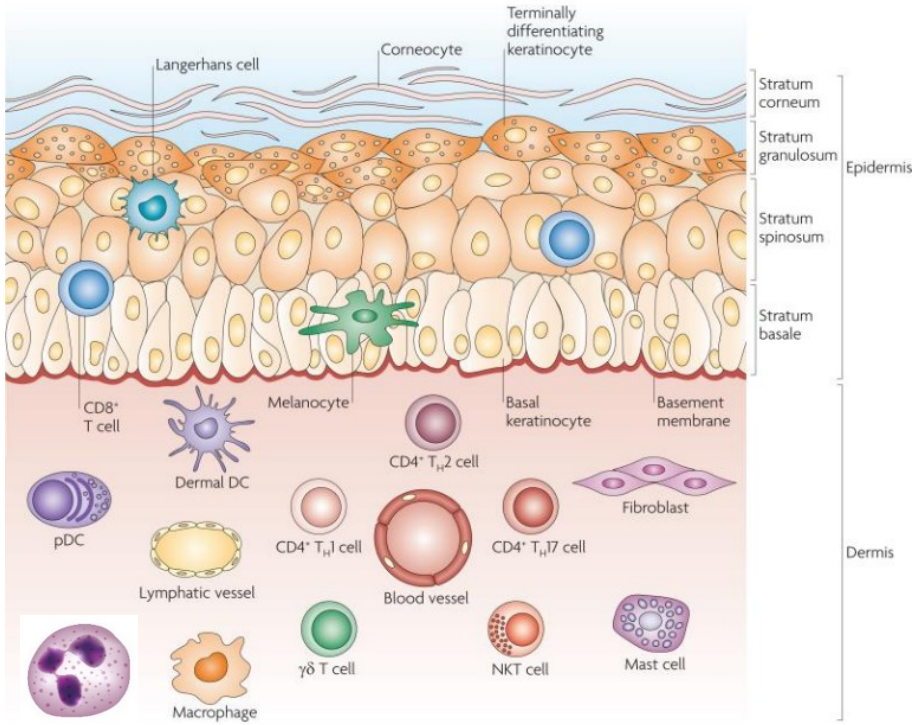
Hæmatologisk sygdom

Reumatoid arthrit

Diabetes?

PATOGENESE AF PYODERMA GANGRÆNOSUM

Neutrofile er nøglespillere
Klonalitet
Kemotaxi defekt



Autoinflammatorisk kaskade
IL-1beta, TNFalfa, IL-8, IL-23

BEHANDLING AF PYODERMA GANGRÆNOSUM

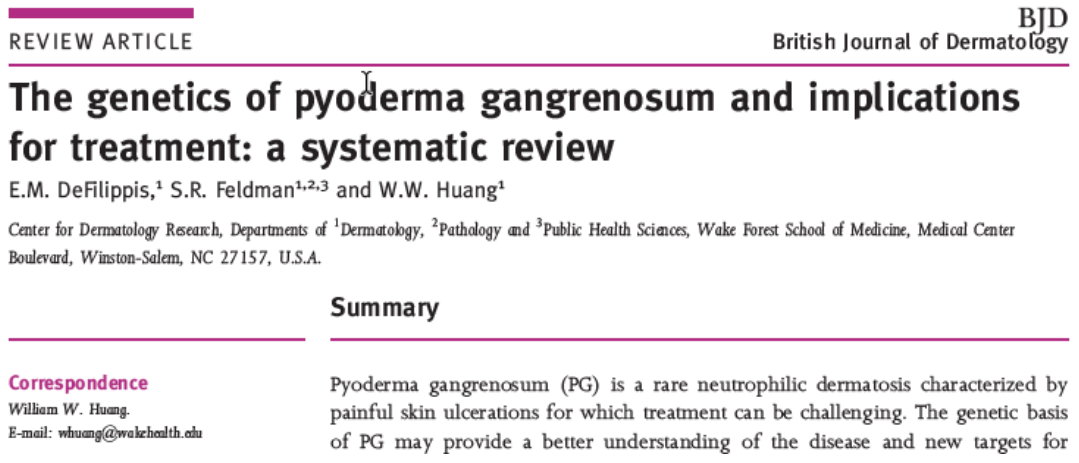
Systemisk behandling

Lokalbehandling

Kompression

SYSTEMISK BEHANDLING

Prednisolon
Cyklosporin
Imurel
Methotrexat
Dapson
Infliximab
Anakinra
Canakinumab



REVIEW ARTICLE

BJD
British Journal of Dermatology

The genetics of pyoderma gangrenosum and implications for treatment: a systematic review

E.M. DeFilippis,[1] S.R. Feldman[1,2,3] and W.W. Huang[1]

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Summary

Pyoderma gangrenosum (PG) is a rare neutrophilic dermatosis characterized by painful skin ulcerations for which treatment can be challenging. The genetic basis of PG may provide a better understanding of the disease and new targets for

Pyoderma associeret til anden sygdom: Behandling rettes mod underliggende sygdom

BEHANDLING AF PYODERMA GANGRÆNOSUM- EVIDENS ANNO JANUAR 2023

Dermatology

Wounds and Healing – Review Article

Dermatology 2022;238:785–792
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Pyoderma Gangrenosum and Interleukin Inhibitors: A Semi-Systematic Review

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Anti IL-1 (Canakinumab, Anakinra) 70/57% respons/komplet respons rate. Anti IL-12/23 (Ustekinumab) 79% respons, 71% respons/komplet respons rate.

Pyoderma gangrenosum and tumour necrosis factor alpha inhibitors: A semi-systematic review

Hakim Ben Abdallah[1] | Karsten Fogh[2] | Rikke Bech[2]

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Hakim B. Abdallah, Institute of Clinical Medicine, Aarhus Faculty of Health Sciences, Aarhus University, Vennelyst Boulevard 4, Aarhus, 8000,

Pyoderma gangrenosum (PG) is a rare ulcerative skin disease that presents a therapeutic challenge. Tumour necrosis factor alpha (TNFα) inhibitors have been reported to successfully control PG. Our aim was to systematically evaluate and compare the clinical effectiveness of TNFα inhibitors in adults with PG. A literature search including databases such as PubMed, Embase, Scopus, and Web of Science was conducted, using search terms related to PG and TNFα inhibitors. Studies and case reports were included if patients were diagnosed with PG, over the age of

TNFalfa inhibitors (Infliximab, Adalimumab, Etanercept) 87% respons rate, 67% komplet respons rate. Ingen signifikant forskel på TNF alfa inhibitorerne

SYSTEMATIC REVIEW

BJD
British Journal of Dermatology

Effectiveness of systemic treatments for pyoderma gangrenosum: a systematic review of observational studies and clinical trials*

A.C.R. Partridge,[1] J.W. Bal,[1] C.F. Rosen,[2,3] S.R. Walsh,[2,4] W.P. Gulliver[5] and P. Fleming[2]

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[5]Department of Medicine, Faculty of Medicine, Memorial University of Newfoundland, St. John's, Canada

Linked Comment: Thomas. Br J Dermatol 2018; 179:240–241.

Der er bedst evidens for systemisk behandling med kortikosteroid, Ciclosporin, Infliximab og Canakinumab

Summary

BEHANDLING AF PYODERMA GANGRÆNOSUM- EVIDENS ANNO JANUAR 2023

Systemisk behandling – bedst evidens:
Prednisolon
Ciclosporin
TNF alfa hæmmer
IL-1 hæmmer
(IL-12/23 hæmmer)

Acta Dermato-Venereologica
Medical Journals Sweden AB

Pyoderma Gangrenosum: A Retrospective Study of Clinical Characteristics, Comorbidities, Response to Treatment and Mortality Related to Prednisone Dose

Louise SCHØSLER, Karsten FOGH, and Rikke BECH

Additional article information

Diabetes – Komorbiditet?

Abstract

Pyoderma gangrenosum is an uncommon ulcerative neutrophilic dermatosis. Clinical presentation, location and associated diseases are diverse. Treatment of pyoderma gangrenosum includes treating the underlying comorbidity supplemented with topical and/or systemic agents. However, treatment is often challenging. The aim of this study was to explore the diversity of pyoderma gangrenosum and its treatments. A total of 64 patients with pyoderma, at Department of Dermatology, Aarhus University hospital, Denmark, were included in the study. The patients' records were reviewed over a 6-year period for clinical presentation, associated diseases, treatments and response to tre time to mortality after diagnosis and prednisone dose over time. A variety of accompanying comorbidities were found, including a possible association with diabetes. Tumour necrosis α inhibitors were used as third- or fourth-line but showed the shortest time to remission, and use of prednisone was associated with a higher mortality rate. These findings are discussed in relation to future approaches to treatment of pyoderma gangrenosum.

Key words: pyoderma gangrenosum, comorbidity, immunosuppressants, prednisone, mortality rate

EPIDEMIOLOGY

BJD
British Journal of Dermatology

Comorbidities, mortality and survival in patients with pyoderma gangrenosum: a Danish nationwide registry-nested case–control study*

H. Ben Abdallah, R. Bech, K. Fogh, A.B. Olesen and C. Vestergaard

Department of Dermatology, Aarhus University Hospital, Aarhus, Denmark

Linked Comment: A.D. Ormerod. Br J Dermatol 2021; 185:1089–1090.

Moderat – svær PG:
IBD; OR:19,15, HR 1 år: 6,51
3 gange så høj dødelighed som matchede kontroller

Statusartikel

Ugeskr Læger 2021;183:V12200949

Pyoderma gangraenosum

Ewa Anna Burian[1], Tonny Karlsmark[1, 2], Karsten Fogh[3] & Rikke Bech[3]

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Adriana Caixinha, abstract, NDA, 2022

Pyoderma gangrenosum and concomitant periphery arterial disease: a case series and literature review

Purpose: Pyoderma gangrenosum (PG) is a neutrophilic dermatosis associated with systemic inflammatory diseases. Peripheral arterial disease (PAD) is a manifestation of atherosclerosis, which is a chronic inflammatory disease. We describe the cases of 7 patients diagnosed with both entities.

Methods: We performed a retrospective medical chart review of 7 patients with an overlap of PAD and PG and compared treatment strategies and outcomes.

Results: Four of the patients were men, mean age at PG diagnosis was 69 and diagnosis of PAD was made at a mean of 2.43 years after PG diagnosis. Three patients had a normal toe-brachial index at early stages of PG and rapidly developed severe PAD within a short period of time. All patients required treatment with multiple immunosuppressive agents. Invasive and non-invasive strategies were initiated when indicated for the treatment of PAD. 3 of the patients required bilateral femur amputation, 3 required unilateral femur amputation and 1 remitted completely.

Conclusions: **6 out of 7 patients, had a poor outcome, requiring amputation**, even though adequate treatment was initiated. We propose that PAD, whether by reducing the healing potential or by partially contributing to the pathophysiology of the wounds, is a risk factor for the prognosis of PG. Furthermore, the fact that 3 of the patients developed PAD within a very short period of time after the diagnosis of PG, suggests that PG could itself be a risk factor for the development of PAD. However, more clinical data is required to adequately assess this possible relation.

Optimering af sårhelingspotentiale

- Coban2 forbindinger
- Overtryks behandling/IPC
- Negative pressure wound therapy/NPWT
- Debridement af sårbunden

VASCULITIS - PRIMÆR

KAR	- GRANULOMER	+ GRANULOMER
SMÅ	LEUKOCYTOKLASTISK HENOCH SCHÖNLEIN ESS. KRYOGLOBULINAEMISK MIKROSKOPISK ANGITIIS	WEGENER CHURG-STRAUSS
MELLEMSTORE	POLYARTERITIS NODOSA KAWASAKI	
STORE		KÆMPECELLEARTERITIS TAKAYASU´s ARTERITIS

VASCULITIS - SEKUNDÆR

INFLAMMATORISKE BINDEVÆVSSYGDOMME	**LUPUS ERYTHEMATOSUS** **RHEUMATOID ARTHRITIS** **SJÖGRENS SYNDROM**
INFEKTIONER	**HEPATITIS B & C** **PARVOVIRUS B-19** **STREPTOKOKSEPSIS** **MENINGOKOKSEPSIS** **GONOKOKSEPSIS**
LÆGEMIDLER	**SULFONAMIDER, PC, THIAZIDER, M.M.**
NEOPLASIER	**LYMFOMER** **LEUKÆMI** **CARCINOMER**

SYSTEMISK BEHANDLING AF VASKULIT

- **Behandle underliggende årsag** – fx infektion, seponere medicin
- De fleste pt med kutane vaskulitter heler spontant
- Prednisolon, Imurel, Dapson, Colchicin, Plaquenil, Methotrexat (autoimmun sgd), CellCept (IgA)
- Svære tilfælde: Ciclosporin, Infliximab, Cyclophosfamid, Rituximab, Immunglobulin, Tofacitinib?
- Udtrapning 3-6 mdr

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www.em-consulte.com

Quarterly Medical Review
Vasculitis

Management of cutaneous vasculitis

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ARTICLE INFO

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ABSTRACT

Cutaneous vasculitis encompasses cutaneous components of systemic vasculitides, skin-limited variants of systemic vasculitides, such as IgA vasculitis or cutaneous polyarteritis nodosa, and single-organ

RHEUMATOLOGY

Rheumatology 2021;60:4039–4047
doi:10.1093/rheumatology/keab402
Advance access publication 4 May 2021

Systematic review and meta analysis

Therapeutic options for cutaneous polyarteritis nodosa: a systematic review

Eleni Papachristodoulou [1], Loukas Kakoullis [1], Eleni Tiniakou[2] and Konstantinos Parperis[3,4]

Abstract

Objective. Cutaneous polyarteritis nodosa (CPAN) is a necrotizing vasculitis of the middle-size vessels, confined to the skin. We conducted a systematic review in order to identify studies evaluating the different treatment modalities used in CPAN.
Methods. This systematic review was conducted according to PRISMA guidelines, registered in PROSPERO: CRD42020222195. PubMed/Medline databases were searched from inception to

LETTER

DERMATOLOGIC THERAPY WILEY

Tofacitinib for the treatment of refractory or glucocorticoid-dependent cutaneous leukocytoclastic vasculitis

Dear Editor,

Cutaneous leukocytoclastic vasculitis (CLV) is a common small-vessel vasculitis that involves the arterioles, capillaries, and postcapillary venules.[1] To date, there is no standardized treatment for recurrent or refractory CLV. Tofacitinib, a Janus kinase (JAK)1/3 inhibitor, is short time after the glucocorticoid was discontinued. The patient visited our department and all laboratory tests (including blood cell count, routine urine test, liver function index, renal function index, CRP, ESR, etc.) were normal. The patient was first administered a combination of 50 mg/day prednisone equivalent and 10 mg/w

PATHERGI I FORBINDELSE MED VASKULIT?

- **Nej!**
- **Dvs operation, NPWT etc. kan iværksættes helt fra starten af sårbehandlingen**

A Comprehensive Review on **Marjolin's Ulcers**: Diagnosis and Treatment
Brian Pekarek, Stacie Buck, and Lawrence Osher
J Am Col Certif Wound Spec. 2011; 3, 60–64

Despite the misnomer, Marjolin's ulcers really reflect malignant degeneration arising within a **pre-existing cicatrix or scar**. In most instances, biopsied lesions demonstrate well-differentiated squamous cell tumors, although other epidermoid lesions are occasionally encountered. The lesions are rare and are most commonly found in the lower extremity, especially the heel and plantar foot. In light of the close association of these lesions with scarred tissues associated with **various chronic lower-extremity wounds**, those involved in health care delivery to these patients must be aware of Marjolin's ulcer, its manifestations and potential ramifications.

Martorell (hypertensiv iskæmisk arteriolosklerose)

- Langvarig hypertension
- 0,5% af befolkningen i vestlige lande
- Ekstremt smertefulde sår. Ankelniveau
- Øget modstand i arteriolerne og nedsat evne til vasodilation
- Begrænset effekt af anti hypertensiv behandling på sårhelingen. Damage control
- **Hudtransplantat**, Wireless Microcurrent Stimulation Therapy (WMST), konservativ sårbeh.

Referencer:

Vuerstaek et al; Arteriolosclerotic ulcer of Martorell; JEADV 2010, 24, 867–874;

Jürg Hafner; Calciphylaxis and Martorell Hypertensive Ischemic Leg Ulcer: Same Pattern – One Pathophysiology; Dermatology 2016;232:523–533

Wirsing et al; Martorell's Ulcer Successfully Treated by Wireless Microcurrent Stimulation technology; Advances in Skin & Wound Care & february 2019

Stine Maria Andersen et al; Martorells sår; Ugens billede; Ugeskr Læger 2017;179:V69315

Scott G. Westphal; Troy Plumb, 2022, University of Nebraska

Calciphylaxis, also known as **calcific uremic arteriolopathy**, is a rare but potentially devastating condition most often observed in patients with end-stage renal disease, although it does occasionally develop in patients without renal failure. It is characterized by **cutaneous arteriolar calcification and subsequent tissue ischemia and infarction and causes painful skin lesions.** Calciphylaxis is associated with substantial morbidity due to severe pain, non-healing wounds, and frequent hospitalizations. It is a highly fatal condition with **1-year mortality rates greater than 50 percent**, most frequently due to sepsis. This activity describes the evaluation and management of calciphylaxis and highlights the role of the interprofessional team in improving care for affected patients.

…..er der noget vi skal være opmærksomme på fremover??

Kutane bivirkninger til targeteret behandling

- **Immunterapi (acne etc.)**
- **Protein kinase inhibitorer (sårheling).**

Effect of tyrosine kinase inhibitors on wound healing and tissue repair: implications for surgery in cancer patients

Devron R Shah 1, Shamik Dholakia, Rashmi R Shah
Drug Safety volume 37, 135–149 (2014)

…… If TKIs are shown to significantly impair wound healing, patients receiving TKI therapy will require special monitoring and a collaborative approach between oncologists and surgeons for individualized reappraisal of the risk/benefit of the TKI treatment.

…..hvis du vil vide mere:

https://www.sst.dk/da/udgivelser/2017/nkr-behandling-af-kronisk-oedem-i-underekstremiteterne

https://www.saar.dk/wp-content/uploads/2021/05/kompressionguide_2.udg_.pdf

https://dds.nu/retningslinjer/abc-for-ulcus-cruris_dds-guideline_2020_revision-efter-hoering_clean/