

Sårpodning versus sårbopsi for mikrobiologisk diagnostik af diabetiske fodsår

Review information

Authors

Sundhedsstyrelsen¹

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Citation example: S. Sårpodning versus sårbopsi for mikrobiologisk diagnostik af diabetiske fodsår. Cochrane Database of Systematic Reviews [Year], Issue [Issue].

Abstract

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Main results

Authors' conclusions

Plain language summary

[Summary title]

[Summary text]

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Clinical pathway

Prior test(s)

Role of index test(s)

Alternative test(s)

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Findings

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Applicability of findings to the review question

Authors' conclusions

Implications for practice

Implications for research**Acknowledgements****Contributions of authors****Declarations of interest****Differences between protocol and review****Published notes****Characteristics of studies****Characteristics of included studies****Bill 2001**

Patient Selection

A. Risk of Bias	
Patient Sampling	Consecutive run in with patients who were willing to participate
Was a consecutive or random sample of patients enrolled?	Yes
Was a case-control design avoided?	Yes
Did the study avoid inappropriate exclusions?	Yes

Index Test

Index tests	Sårpodning
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Index Test

A. Risk of Bias	
Were the index test results interpreted without knowledge of the results of the reference standard?	Unclear
If a threshold was used, was it pre-specified?	No
Could the conduct or interpretation of the index test have introduced bias?	Low risk

B. Concerns regarding applicability	
Are there concerns that the index test, its conduct, or interpretation differ from the review question?	Low concern

Reference Standard

A. Risk of Bias	
Target condition and reference standard(s)	Diabetisk fodsår. Sårbiopsi.
Is the reference standards likely to correctly classify the target condition?	Yes
Were the reference standard results interpreted without knowledge of the results of the index tests?	Unclear

Flow and Timing

A. Risk of Bias	
Flow and timing	
Was there an appropriate interval between index test and reference standard?	Yes
Did all patients receive the same reference standard?	Yes
Were all patients included in the analysis?	Yes

User defined characteristics

Identification	Sponsorship source: no funding Country: USA Setting: 38 pt enrolled and taken biopsies and swabs from a chronic wound Authors name: timothy j bill Institution: dpt of plastic surgery, university of virginia Email: gtr3s@virginia.edu Address: dpt of plastic surgery, university of virginia, box 801351, charlottesville
Study design	Prospective cohort study
Population	INCLUSION CRITERIA chronic wound, more than 6 months old EXCLUSION CRITERIA no gross contamination of the wound no necrotic tissue, purulent drainage Patient characteristics: <i>Female, N (%): 13</i> <i>DFU, N (%): 10 (26,32%)</i>
Notes	

Demetriou 2013

Patient Selection

A. Risk of Bias	
Patient Sampling	This study included 50 consecutive diabetic patients (49 type 2 diabetes, 1 type 1 diabetes) with clinically infected foot ulceration presenting to the Outpatient Clinic of the Diabetic Foot between January 1 and December 31, 2012
Was a consecutive or random sample of patients enrolled?	Yes
Was a case-control design avoided?	Yes
Did the study avoid inappropriate exclusions?	Yes

Index Test

Index tests	Sårpodning
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Index Test

A. Risk of Bias	
Were the index test results interpreted without knowledge of the results of the reference standard?	Unclear
If a threshold was used, was it pre-specified?	No
Could the conduct or interpretation of the index test have introduced bias?	Unclear risk

B. Concerns regarding applicability	
Are there concerns that the index test, its conduct, or interpretation differ from the review question?	Unclear concern

Reference Standard

A. Risk of Bias	
Target condition and reference standard(s)	Diabetisk fodsår. Sårbiopsi.
Is the reference standards likely to correctly classify the target condition?	Yes
Were the reference standard results interpreted without knowledge of the results of the index tests?	Unclear

Flow and Timing

A. Risk of Bias	
Flow and timing	After debridement, swab and deep-tissue cultures were taken from ulcers
Was there an appropriate interval between index test and reference standard?	Yes
Did all patients receive the same reference standard?	Yes
Were all patients included in the analysis?	Yes

User defined characteristics

Identification	<p>Sponsorship source: no funding</p> <p>Country: Greece</p> <p>Setting: the diagnostic performance of swabs versus tissue cultures in 28 diabetic patients with neuropathic (group A) and 22 diabetic patients with neuroischemic foot ulcer (group B) and the differences in bacterial isolates between the 2 groups.</p> <p>Authors name: Maria Demetriou</p> <p>Institution: Outpatient Clinic of the Diabetic Foot, and Microbiology Laboratory, Democritus University of Thrace,</p> <p>Email: maria_thdemetriou@yahoo.gr</p> <p>Address: Outpatient Clinic of the Diabetic Foot, and Microbiology Laboratory, Democritus University of Thrace, Leontaridou 4A, Alexandroupolis 68100, Greece.</p>
Study design	Prospective cohort study
Population	<p>INCLUSION CRITERIA</p> <p>A foot ulcer was defined as a wound penetrating through all skin layers localized in the foot beneath the malleoli.18-20Clinical diagnosis of infection was based on the presence of at least 2 of the following criteria: local swelling or induration, erythema greater than 0.5 cm in any direction around the ulcer, local tenderness or pain, local increase of temperature, and purulent discharge.8 Ulcers were graded according to the University of Texas (UT) grading system.21Clinical severity of infection was graded according to the PEDIS system of the International Working Group on the Diabetic Foot.</p> <p>EXCLUSION CRITERIA</p> <p>Patients with osteomyelitis (diagnosed as positive probe-to-bone test and/or evidence on magnetic resonance imaging) were excluded.</p> <p>Patient characteristics:</p>

	Female, N (%): 19 (38%) DFU, N (%): 100% Age, mean (SD): 67.9 years
Notes	

Huang 2016

Patient Selection

A. Risk of Bias	
Patient Sampling	Consecutive
Was a consecutive or random sample of patients enrolled?	Yes
Was a case-control design avoided?	Yes
Did the study avoid inappropriate exclusions?	Yes

Index Test

Index tests	Sårpodning
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Index Test

A. Risk of Bias	
Were the index test results interpreted without knowledge of the results of the reference standard?	Yes
If a threshold was used, was it pre-specified?	Yes
Could the conduct or interpretation of the index test have introduced bias?	Low risk

B. Concerns regarding applicability	
Are there concerns that the index test, its conduct, or interpretation differ from the review question?	Low concern

Reference Standard

A. Risk of Bias	
Target condition and reference standard(s)	Diabetisk fodsår. Sårbiopsi.
Is the reference standards likely to correctly classify the target condition?	Yes
Were the reference standard results interpreted without knowledge of the results of the index tests?	Yes

Flow and Timing

A. Risk of Bias	
Flow and timing	
Was there an appropriate interval between index test and reference standard?	Yes
Did all patients receive the same reference standard?	Yes
Were all patients included in the analysis?	Yes

User defined characteristics

Identification	<p>Sponsorship source: Our study was supported by the Science and Technology Planning Project of Guangdong Province, China (no.2013B022000063)</p> <p>Country: China</p> <p>Setting: o compare the efficacy of swabbing versus tissue biopsy for microbiological diagnosis of diabetic foot infection. Methods. This was a prospective trial. Fifty-six patients with diabetic foot infection were divided into the following 3 groups according to the PEDIS grading system: grade 2 (n=10), grade 3 (n=29), and grade 4 (n=17). Two specimens were collected from each wound for microbial culturing after debridement, including a superficial swab and a deep tissue punch biopsy specimen</p> <p>Authors name: Ying Huang</p> <p>Institution: Department of Endocrinology and Metabolism, Nanfang Hospital, Southern Medical University, Guangzhou 510515, China</p> <p>Email: aof1212@163.com</p> <p>Address: Department of Endocrinology and Metabolism, Nanfang Hospital, Southern Medical University, Guangzhou 510515, China</p>
Study design	Prospective cohort study
Population	<p>INCLUSION CRITERIA diabetic patients with clinically infected foot ulcers. The patients were hospital-ized at the Department of Endocrinology and Metabolism of Hindawi Publishing Corporation International Journal of Endocrinology Volume 2016, Article ID 8198714, 6 pages http://dx.doi.org/10.1155/2016/8198714 2 International Journal of Endocrinology Nanfang Hospital affiliated with Southern Medical University from October 2014 to July 2015.</p> <p>Patient characteristics: <i>Female, N (%): 21</i> <i>DFU, N (%): 56 (100%)</i> <i>Age, mean (SD): 61.6</i> <i>BMI, mean (SD): 24.2</i> <i>HBA1C, mean (SD): 9.8</i> <i>PERIPHERAL NEUROPATHY, N (%): 56 (100%)</i></p>
Notes	

Mutluoglu 2012

Patient Selection

A. Risk of Bias	
Patient Sampling	Consecutive
Was a consecutive or random sample of patients enrolled?	Yes
Was a case-control design avoided?	Yes
Did the study avoid inappropriate exclusions?	Yes

Index Test

Index tests	Sårpodning
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Index Test

A. Risk of Bias	
Were the index test results interpreted without knowledge of the results of the reference standard?	Unclear
If a threshold was used, was it pre-specified?	No
Could the conduct or interpretation of the index test have introduced bias?	Unclear risk

B. Concerns regarding applicability	
Are there concerns that the index test, its conduct, or interpretation differ from the review question?	Low concern

Reference Standard

A. Risk of Bias	
Target condition and reference standard(s)	Diabetisk fodsår. Sårbiopsi.
Is the reference standards likely to correctly classify the target condition?	Yes
Were the reference standard results interpreted without knowledge of the results of the index tests?	Unclear

Flow and Timing

A. Risk of Bias	
Flow and timing	On the same day
Was there an appropriate interval between index test and reference standard?	Yes
Did all patients receive the same reference standard?	Yes
Were all patients included in the analysis?	Yes

User defined characteristics

Identification	<p>Sponsorship source: no funding</p> <p>Country: Turkey</p> <p>Setting: We reviewed clinical and microbiological data from patients with diabetes who presented during atwo-year period to our hyperbaric medicine center with a foot ulcer. We identified patients who had at leastone concomitantly collected SS and DT pair of specimens sent for culture</p> <p>Authors name: . M. Mutluoglu</p> <p>Institution: Department ofUnderwater and Hyperbaric Medicine, Gulhane Military Medical Academy HaydarpasaTeaching Hospital, 34668, Uskudar, Istanbul, Turkey</p> <p>Email: drmutluoglu@gmail.com</p> <p>Address: Department ofUnderwater and Hyperbaric Medicine, Gulhane Military Medical Academy HaydarpasaTeaching Hospital, 34668, Uskudar, Istanbul, Turkey</p>
Study design	Retrospective cohort study
Population	<p>INCLUSION CRITERIA</p> <p>all patients with possibly infected wounds we obtain around culture, usually by both superficial swab and deep tissuebiopsy. We reviewed our records to identify all patients with adiabetic foot ulcer seen during a 2-year period (1 January 2008through 31 December 2009). From these patients, we identified thosetreated either as inpatients or outpatients who had concomitantspecimens for culture taken by both superficial swab and deep tissuebiopsy. Typically, we perform these cultures on the day a patientpresents and repeat them when clinically indicated. We assess allpatients using a customized comprehensive diabetic foot data formthat documents their clinical conditions, ulcer characteristics anddemographic data; we also classify all diabetic foot wounds using theUniversity of Texas scheme (Armstrong, Lavery, & Harkless, 1998).We define infection of a diabetic foot wound by criteria consistentwith the validated criteria proposed by the Infectious Diseases Societyof Americ</p>
Notes	

Nelson 2018

Patient Selection

A. Risk of Bias	
Patient Sampling	"Between 15 November 2011 and 15 May 2013 we screened 680 patients, and enrolled 401 patients from 25 centres. We excluded one patient whose consent was lost and five for whom one or more sample was lost or misused, resulting in a full analysis set of 400 patients and an evaluable population of 395 patients"
Was a consecutive or random sample of patients enrolled?	Yes
Was a case-control design avoided?	Yes
Did the study avoid inappropriate exclusions?	Yes

Index Test

Index tests	Sårpodning
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Index Test

A. Risk of Bias	
Were the index test results interpreted without knowledge of the results of the reference standard?	Yes
If a threshold was used, was it pre-specified?	Yes
Could the conduct or interpretation of the index test have introduced bias?	Low risk

B. Concerns regarding applicability	
Are there concerns that the index test, its conduct, or interpretation differ from the review question?	Low concern

Reference Standard

A. Risk of Bias	
Target condition and reference standard(s)	Inficeret Diabetisk fodsår. Sårbiopsi
Is the reference standards likely to correctly classify the target condition?	Yes
Were the reference standard results interpreted without knowledge of the results of the index tests?	Yes

Flow and Timing

A. Risk of Bias	
Flow and timing	Sample were taken immediately after each other, 5/400 were excluded, 1 missing consent and 4 missing samples
Was there an appropriate interval between index test and reference standard?	Yes
Did all patients receive the same reference standard?	Yes
Were all patients included in the analysis?	Yes

User defined characteristics

Identification	<p>Sponsorship source: This work was supported by the National Institute for Health Research (NIHR) Health Technology Assessment (HTA) programme (project number 09/75/01).</p> <p>Country: UK</p> <p>Setting: Primary and secondary care foot ulcer/diabetic outpatient clinics and hospital wards across England</p> <p>Authors name: Andrea Nelson</p> <p>Institution: School of Healthcare, University of Leeds, Leeds, UK</p> <p>Email: E.A.Nelson@leeds.ac</p>
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	Address: School of Healthcare, University of Leeds, Leeds, UK
Study design	Prospective cross-sectional cohort study
Population	<p>INCLUSION CRITERIA a diagnosis of diabetes mellitus (type 1 or 2); were at least 18 years old; and had a suspected infected DFU (with or without bone infection, based on clinical signs and symptoms using IDSA/IWGDF criteria and the judgement of the investigator)</p> <p>EXCLUSION CRITERIA the treating clinician deemed it inappropriate to take a tissue or wound swab sample for any reason; the patient had previously been recruited into the study; or they were unwilling or unable to provide informed consent. Patients were not excluded if they were currently being, or had recently been, treated with antimicrobial therapy.</p> <p>Patient characteristics: Female, N (%): 84 (21) DFU, N (%): 342 (85.5) Age, mean (SD): 63.3 (13.3)</p>
Notes	

Footnotes

Characteristics of excluded studies

Footnotes

Characteristics of studies awaiting classification

Footnotes

Characteristics of ongoing studies

Footnotes

References to studies

Included studies

Bill 2001

Bill, T. J.; Ratliff, C. R.; Donovan, A. M.; Knox, L. K.; Morgan, R. F.; Rodeheaver, G. T.. Quantitative swab culture versus tissue biopsy: a comparison in chronic wounds. *Ostomy/wound management* 2001;47(1):34-37. [DOI:]

Demetriou 2013

Demetriou, M.; Papanas, N.; Panopoulou, M.; Papatheodorou, K.; Bounovas, A.; Maltezos, E.. Tissue and swab culture in diabetic foot infections: neuropathic versus neuroischemic ulcers. *The international journal of lower extremity wounds* 2013;12(2):87-93. [DOI: 10.1177/1534734613481975 [doi]]

Huang 2016

Huang, Y.; Cao, Y.; Zou, M.; Luo, X.; Jiang, Y.; Xue, Y.; Gao, F.. A Comparison of Tissue versus Swab Culturing of Infected Diabetic Foot Wounds. *International journal of endocrinology* 2016;2016(Journal Article):8198714. [DOI: 10.1155/2016/8198714 [doi]]

Mutluoglu 2012

Mutluoglu, M.; Uzun, G.; Turhan, V.; Gorenek, L.; Ay, H.; Lipsky, B. A.. How reliable are cultures of specimens from superficial swabs compared with those of deep tissue in patients with diabetic foot ulcers? *Journal of diabetes and its complications* 2012;26(3):225-229. [DOI: 10.1016/j.jdiacomp.2012.03.015 [doi]]

Nelson 2018

Nelson, A.; Wright-Hughes, A.; Backhouse, M. R.; Lipsky, B. A.; Nixon, J.; Bhogal, M. S.; Reynolds, C.; Brown, S.; CODIFI collaborators. CODIFI (Concordance in Diabetic Foot Ulcer Infection): a cross-sectional study of wound swab versus tissue sampling in infected diabetic foot ulcers in England. *BMJ open* 2018;8(1):e019437-2017-019437. [DOI: 10.1136/bmjopen-2017-019437 [doi]]

Excluded studies

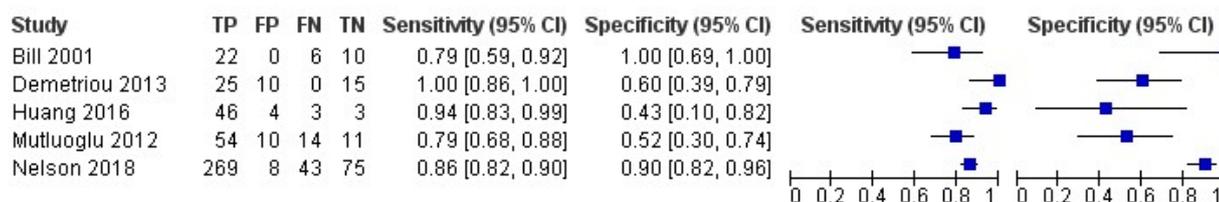
Data and analyses

Data tables by test

Test	Stu di es	P ar ti ci p a nts
1 Podning	5	6 28

Figures

Figure 1 (Analysis 1)



Forest plot of 1 Podning.

Figure 2

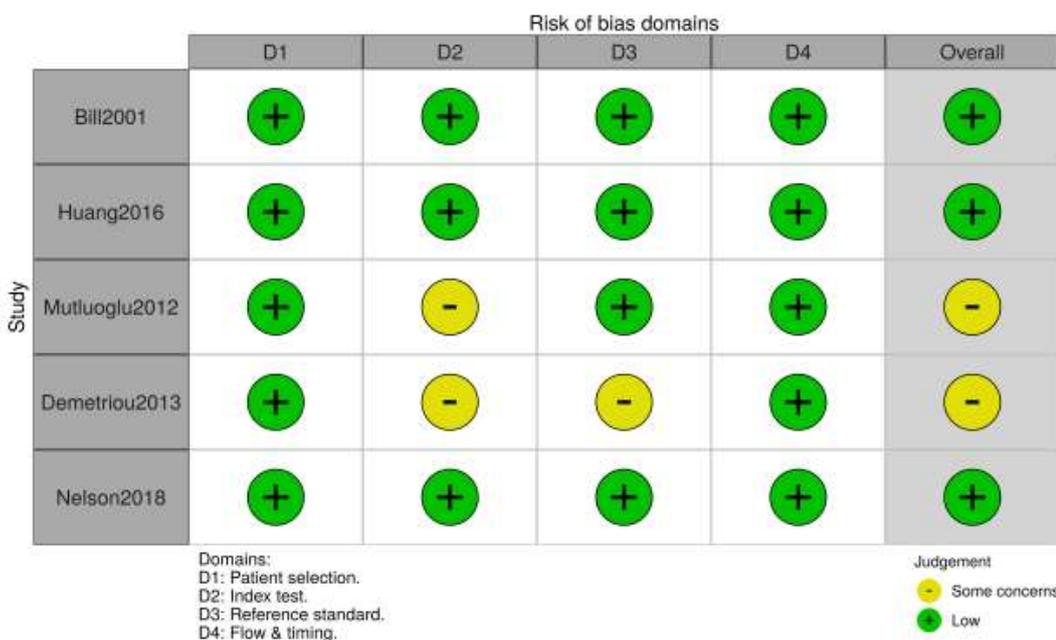


Figure 3

