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Supplement of

The scientific publication score – a new tool for summarizing evidence and data quality criteria of biomedical publications

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Scientific Publication Score

Open Statement Diagnose

Open Statement: Joint aspiration culture-51

Score: **3.87** SD: (0.40)

Subgroup: other 

Posted by Thomas Maurer

Vote button

	Title	Author	Journal	Year	Paper level (mean)	Readers vote (mean)	Number of Voters	
1	Is there a role for tissue biopsy in the diagnosis of periprosthetic infection?	Meermans, Geert; Haddad, Fares S;	Clinical orthopaedics and related research	2010	4.00 	4.00	1	   
2	Prospective analysis of preoperative and intraoperative investigations for the diagnosis of infection at the sites of two hundred and two revision total hip arthroplasties.	Spanghel, M J; Masri, B A; O'Connell, J X; Duncan, C P;	The Journal of bone and joint surgery. American volume	1999	4.00 	3.00	1	   
3	Culture and PCR analysis of joint fluid in the diagnosis of prosthetic joint infection.	Gallo, Jiri; Kolar, Milan; Dendis, Milos; Loveckova, Yvona; Sauer, Pavel; Zapletalova, Jana; Koukalova, Dagmar;	The new microbiologica	2008	4.00 	3.00	1	   
4	Evaluation of the painful prosthetic joint. Relative value of bone scan, sedimentation rate, and joint aspiration.	Levitsky, K A; Hozack, W J; Balderston, R A; Rothman, R H; Gluckman, S J; Maslack, M M; Routh, R F.	The Journal of arthroplasty	1991	4.00 	3.00	1	   

- Demonstration of the ranked publications for the specific subject: diagnose methods
- Joint aspiration culture was chosen as an open statement /question in this specific subject
- New publication could be downloaded from PubMed by the blue magnifying glass.
- Experts were able to corrected errors by further editing (orange) and deleting (red).
- All publications were listed by title, author, journal, year and number of voters.
- Mean study level (evidence level) and mean data level (initially named readers vote) summarized all votings for each publication.
- The Final SPS summarized and avaraged all publication votes by calculation. It was demonstrated in the upper right corner (minimum 1, maximum 5)
- The vote button (light) opened the voting procedure for each publication.

Scientific Publication Score

Voting Procedure

Voting Time 10 min.

Note paper results

Open Statement: Joint aspiration culture-51

Subgroup: other

Publication-Title: Is there a role for tissue biopsy in the diagnosis of periprosthetic infection?
 Author: Meermans, Geert; Haddad, Fares S;
 Journal: Clinical orthopaedics and related research
 Year: 2010

Paper level vote: Pro Statement Indifferent opinion Against Statement

One big study randomised double blind

Readers vote: recommended

	n	Follow up	Survival rate; Recurrence rate	Sensitivity	Spezifity	p
Highly recommended	> 500	> 15 years	> 0.95; < 0.05	> 0.95	> 0.95	< 0.001; Power 0.8
Recommended	> 100	> 10 years	> 0.90; < 0.10	> 0.85	> 0.85	< 0.01; Power 0.8
Interesting	100	> 5 years	> 0.90; < 0.10	> 0.75	> 0.75	< 0.05; Power 0.8
Neutral	< 50	< 5 years	< 0.90; > 0.10	< 0.75	> 0.65	0.05; Power 0.8
Not recommended	< 10	< 5 years	< 0.80; > 0.20	< 0.65	< 0.65	> 0.05; Power < 0.8
Failure	No specific information					

Expert-vote should summarize all factors: Chose the classification with the highest number of fitting criteria. In case of criteria in different classifications chose the mean classification. Additional selection in relation to economics, relevance and practicability. In comparison studies rank to the p-value or specific publication result.

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Search: Is there a role for tissue biopsy in the dia...
 Display Settings: Abstract
 See 1 article found using an alternative search:
 Clin Orthop Relat Res. 2010 May;468(5):1410-7. Epub 2010 Feb 4.
Is there a role for tissue biopsy in the diagnosis of periprosthetic infection?
 Meermans G, Haddad FS
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Abstract
BACKGROUND: Successful treatment of an infected joint arthroplasty depends on correctly identifying the responsible pathogens. The value of a preoperative biopsy remains controversial.
QUESTIONS/PURPOSES: We (1) compared the sensitivity and specificity of both tests separately and in combination, and (2) asked whether the combination of tissue biopsy and aspiration would improve our diagnostic yield in the evaluation of periprosthetic joint infections.
PATIENTS AND METHODS: We prospectively followed 100 patients with suspected infection of a total joint arthroplasty with THAs and 55 with TKAs. All patients had aspiration with culture and biopsy.
RESULTS: The sensitivity was 83% for aspiration, 79% for biopsy, and 90% for the combination of both techniques. The specificity was 100% for aspiration and biopsy and the combination. The overall accuracy was 84%, 81%, and 90%, respectively.
CONCLUSIONS: Our data suggest tissue biopsy alone offers no clear advantage over joint aspiration. However, the combination of both techniques provides improved sensitivity and accuracy. We recommend the use of tissue biopsy as an adjunct to joint aspiration in the diagnosis of total joint infection.
LEVEL OF EVIDENCE: Level II, diagnostic study. See the Guidelines for Authors for a complete description of levels of evidence.

- The voting procedure for each publication was done in a side by side presentation on the computer dash board.
 - abstract (PubMed)/full paper original on the right side
 - quality assessment documentation on the left side
 - Expert noted whether the study was
 - pro
 - against
 - or indifferent
 in respect to the proposed question/statement
 - Study level (big study, prospective) 4 points, recommended
 - Data level (initially named readers vote)
 - patient number (>100)
 - +sensitivity (>75%)
 - +specificity (>95%)
 summarize to one result 4 points, recommended
- The experts honestly confirmed, that they had read the full paper respecting all quality assessment criteria to the best of their knowledge.