

Publication Rate of Congress Presentations at the Spine Society of Europe



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Disclosure

First and last author are members of the Spine Society of Europe.
No additional conflict of interest.

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Background

- Gold standard to present studies: publication in peer-reviewed journals
- Congress presentations: often referred to and cited in routine patient care, guidelines, textbooks, education, science and publications.
- The quality of congress abstracts and their fate after presentation is an important indicator for the scientific activity of a society.
- The Publication Rate (PR) following congress presentation: accepted indicator
- Only one US study on this topic exists in the growing field of spine surgery (on the congresses of NASS, SRS and ISSLS).
- No study evaluated this aspect of abstracts of the Spine Society of Europe (SSE), one of the world's most important spine societies.

Purpose of the Study

- To assess the Publication Rate of studies at the annual SSE congress
- To compare the results with results for US spine societies
- To study factors affecting publication
- To assess the consistency of congress abstracts and publications
- To serve as a quality control for the SSE

Study Design

- Review of all podium and poster presentations of the SSE congress of the years 2000-2003

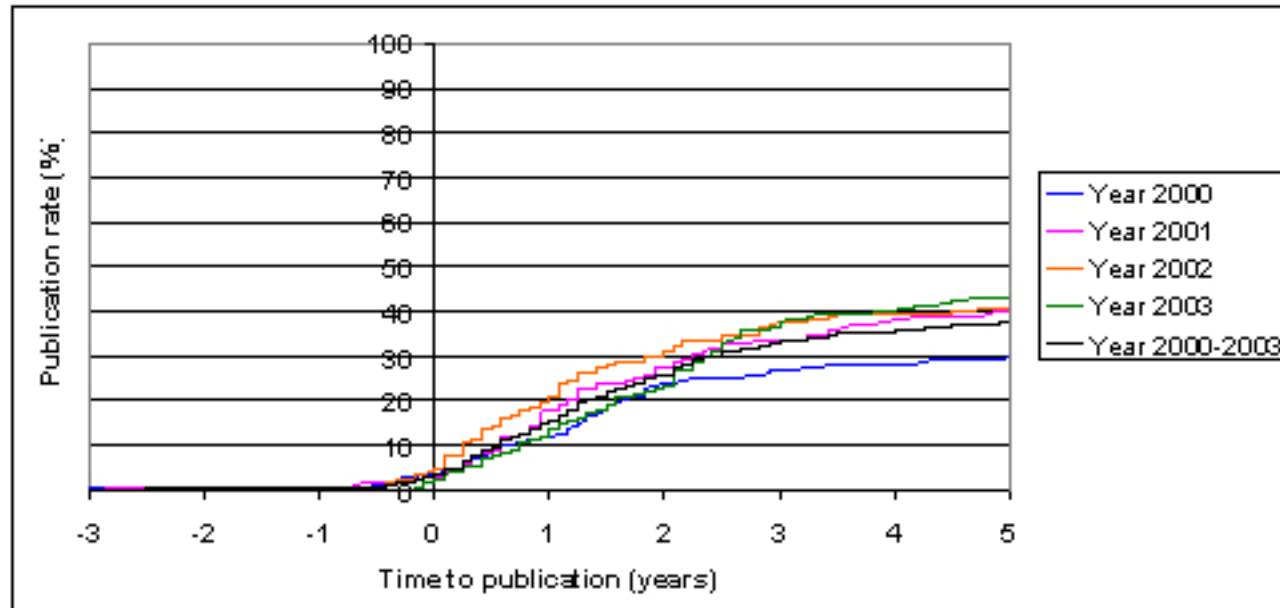
Materials and Methods

- All 839 abstracts of the SSE meetings 2000-2003 were included.
2000 n=259; 2001 n=213; 2002 n=168; 2003 n=199
- Investigation of:
 - PR in peer-reviewed journals within a period of 5 years after the congress based on a standardized PubMed-Search
 - Journals and impact factors
 - Time between congress and publication in full months
 - Subgroup analyses for different factors potentially affecting PR:
level of evidence; type of study; significance of main result
 - Consistency of abstracts with publications (with regard to result, authors, sample size)
- Statistics included chi-square test and odds ratios (OR).

Results

- 839 included abstracts: 318 podium presentations (37.9%)
521 poster presentations (62.1%)
- Overall Publication Rate was 37.8 % (317 publications)
- Mean impact factor: 1.80 ± 1.05 (at the time of publication)
- Publications in 55 different peer-reviewed journals
 - Top 5: - Spine (38.2%)
 - European Spine Journal (23.0%)
 - Journal of Spinal Disorders and Techniques (5.0%)
 - Journal of Bone and Joint Surgery - British (3.2%)
 - Journal of Neurosurgery (2.8%)

Results



Publication rate für all publications (n=317) over time.

- Mean period between congress and publication: 17.7 ± 15.7 months
- 3% of abstracts (n=25): published before congress (7.9% of all 317 publications).

Results

	Publication Rate	OR	P
Podium presentations	48.4%	2.06	< 0.001
Poster presentations	31.3%		
Level of evidence 1 + 2	41.9%	1.66	0.008
Level of evidence 3 + 4 + 5	30.3%		
Experimental studies	46.3%	1.66	0.001
Clinical studies	34.2%		
Prospective studies	41.2%	1.74	0.002
Retrospective studies	28.7%		
Randomized studies	52.5%	2.32	0.002
Nonrandomized studies	32.3%		
Studies with a significant main result	51.9%	2.40	< 0.001
Studies with a nonsignificant main result	31.0%		
Biomechanical studies	55.6%	2.26	< 0.001
Nonbiomechanical studies	35.6%		
Multicenter studies	56.7%	2.67	0.008
Single-center studies	32.9%		

OR = Odds Ratio

- Consistency with regard to **main results**:
 - In all cases main results of abstract and publication were identical.
- Consistency with regard to **composition of authors**:
 - In 51.1% of publications: authors identical with that of the abstract
 - Abstract's first author = first or last author of the publication in 85.8%
 - In 104 publications (32.8%): at least one additional coauthor
 - In 19 publications (6.0%): at least one additional main author (first or last)
- Consistency with regard to **sample sizes**:
 - In 217 publications (68.4%): sample size identical
 - In 59 publications (18.6%): larger sample size in congress abstract compared to publication
 - In 24 publications (7.6%): smaller sample size in congress abstract compared to publication

Results

– Literature review and comparison:

Author	Congress	Year of congress	Follow-up (years)	PR	n Abstracts	Podium /Poster
Wang	North American Spine Society	1990-1992	5-7	40.0%	545	Podium + Poster
	Scoliosis Research Society	1991-1993	4-6	47.4%	308	Podium + Poster
	Intern. Society for the Study of the Lumbar Spine	1991-1993	4-6	45.4%	335	Podium + Poster
Hamlet	American Academy of Orthopaedic Surgeons	1990-1992	4-6	46%	1465	Podium
Murrey	American Academy of Orthopaedic Surgeons	1993	5	44%	573	Podium
Bhandari	American Academy of Orthopaedic Surgeons	1996	5	34%	465	unknown
Harris	American Academy of Orthopaedic Surgeons	1999	5	55%	318	unknown
Donegan	American Academy of Orthopaedic Surgeons	2001	5	49%	756	Podium + Poster
Schulte	Spine Society of Europe	2000-2003	5	37.8%	839	Podium + Poster

PR = Publication Rate

Conclusion

- Publication Rate (PR) of 37.8% within 5 years with an average impact factor of 1.80 and an average time between congress and publication of 17.7 months
- Podium presentations: higher PR than posters
- Congress presentations of higher quality (e.g. LoE 1+2, randomized, prospective, experimental studies) achieve higher PR
 - => Motivation for study groups to strive for high quality studies !
- Publication bias (studies with significant main result achieved higher PR) exists !
- This bias should be resisted, because studies without significant main results are of a comparable scientific value as those with significant main results !

Conclusion

- Publication Rate of the SSE similar to comparable US congresses (NASS 40%, SRS 47%, ISSLS 45%)

=> This shows the high quality of SSE presentations !

- The fate of the large number of unpublished abstracts (62.2%) needs to be discussed !

=> Motivation for the SSE to help presenters finish publication !

- It needs to be critically questioned if it is acceptable to cite congress abstracts in the scientific literature, that did not pass a journal's peer-review, and to implement their results to clinical practice, guidelines, textbooks.

- Authors' recommendation: This should be reduced to an absolute minimum ! (Gold standard remains: publication in peer-reviewed journal !)