60 and Counting: The History of "The Thoracic and Cardiovascular Surgeon"

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Abstract

Keywords

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The Thoracic and Cardiovascular Surgeon was founded as a scientific journal in 1953, making it one of the oldest publications in this specialty. Bearing the original title Thoraxchirurgie, its first language of publication was German. Although the primary focus lay on thoracic surgery, the concomitantly developing specialty cardiac surgery was also well represented from the start, finally taking over the lead in submissions. After having changed its name to Thoraxchirurgie, Vaskuläre Chirurgie in 1963, it became the official journal of the German Society for Thoracic and Cardiovascular Surgery in 1973. With the language of publication having turned into English in 1979, the final title came into effect. This report gives an overview over 60 years of continued development. The history of this journal illustrates not only the transformations of the surgical disciplines reflected but also those of scientific publishing.

Introduction

There are few scientific medical journals which can look back on a history spanning more than 60 years. The Thoracic and Cardiovascular Surgeon (ThCVS) was founded under its original German name Thoraxchirurgie in 1953, the year in which the first successful cardiac operation with a heart-lung machine was performed by Gibbon. Quite a coincidence or was it? The decades after the Second World War stand for an incredible development in the field of medicine with groundbreaking discoveries in basic science and the emergence of new specialties. The archives of publications spanning the time period from back then to today bear a wealth of information, both scientific as well as historical. It was felt that an analysis of the contributions published over 60 years would illustrate not only the transformations of the surgical disciplines reflected but also those of scientific publishing.

Materials and Methods

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All articles published in the journal from issue 1/1953 to issue 8/2012 were entered into a database. Recorded parameters

included publishing data, surgical specialty (thoracic, cardiac, vascular, and other), category of article (original clinical, original experimental, review, case report, and other), author data, language, and number of references. The articles in the category "cardiac" underwent a separate, more detailed analysis not part of this report.

Trends over time were analyzed and put into perspective against the concomitant development of the surgical specialties and potential changes within the journal.

For the sake of readability, the results are presented here in a chronological order in 5-yearly spotlights together with their historical background. When individual articles are featured, they must be regarded as exemplary.

Results and Background

Between 1953 and December 2012, ThCVS was issued in 60 volumes and published 5,400 articles altogether. The surgical specialties covered were cardiac 3,212 (59%), thoracic 1,709 (32%), and others including vascular 479 (9%).

The original publishing frequency of six issues per year was increased to eight in 2006. Additional supplements were

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introduced over time, either publishing the abstracts presented at the annual meeting of the German Society for Thoracic and Cardiovascular Surgery (disregarded here) or dealing with particular topics of interest in full-length articles (included here).

The journal changed its language of publication to English in 1979, at the same time taking over its current title. Over 60 years, it has seen five Editors-in-Chief, their terms of office ranging from 3 (current) to 25 years (founding) (25, 9, 9, 14, 3+ years).

1953

In 1953, Karl Vossschulte, renowned head of surgery at Giessen University, founded the journal under the name of Thoraxchirurgie together with Thieme Publishers. The subtitle quite impressively read: "Journal for clinical and operative surgery, pathological physiology, experimental pathology of the organs of the chest, and for anaesthesiology" (sic). Vossschulte was aware of the growing importance of thoracic surgery and the many unknowns still connected with it at that time. In the very first foreword, Rudolf Nissen, one of the pioneers in this developing specialty, wrote: "However, it would be absurd to see the foundation of the new journal as a step towards the creation of a specialty of thoracic surgery... On the contrary, the journal should encourage a general surgeon to take a more active part in thoracic organ surgery research and practice than has been the case up to now."² Time would prove him wrong.

The journal, meanwhile, was published six times a year. It is interesting to see that even in the very first volume, published throughout the year in which the first successful cardiac operation with a heart–lung machine ever was performed, already 7 of 58 articles dealt with problems related to the heart. Their titles are listed in **Table 1**. From today's editor's perspective, it is remarkable that four of those have one author only, and the others two, three, and four, respectively. The articles tend to be lengthy and comprehensive, missing the rigid structure required today. References are scarce. Most of the contributions, however, make very good reading, being written in an illustrative and, in parts, very graphic language.

1958

On February 19, 1958, the first cardiac operation with extracorporeal circulation in Germany was performed by Zenker in Marburg. On October 8, Arne Larsson received the first fully implantable pacemaker by Senning in Stockholm. In the United States, the oldest scientific journal covering thoracic surgery, *The Journal of Thoracic Surgery*, founded by the American Association for Thoracic Surgery in 1931, changed its name to *The Journal of Thoracic and Cardio-vascular Surgery*, following the evolution of the specialty.

Thoraxchirurgie also encountered increasing numbers of articles: 26 of 55 articles published in 1958 already dealt with cardiac surgery. A strong focus lay on the technical refinement of the heart-lung machine.^{3–5} In thoracic surgery, chronic empyema and esophageal surgery played an important role, as well as surgery of intrathoracic goiter and respiratory therapy. Single authorships still prevailed.

1963

The journal changed its name to *Thoraxchirurgie, Vaskuläre Chirurgie.* Why the heart was still left out is hard to comprehend in retrospect. Two additional editors were hired: Hegemann (Erlangen) and Senning (by then in Zurich, Switzerland). A rudimentary form of instructions for authors was published, encouraging submission of abstracts in German, English, and French. Thereby, the journal opened itself to a more international audience.

The first fully "foreign language" articles were soon accepted,^{6,7} both dealing with esophageal operations, still an essential part of thoracic surgery.

The individual articles, mostly by single authors, had become much shorter, averaging four to six printed pages. As a result, the number of published articles in 1 year had increased to 91, 32 of which dealt with cardiac surgery. An early form of review article ("Übersicht") appeared, longer by nature and accompanied by an extended reference list.⁸

1968

In 1965, *The Annals of Thoracic Surgery* was published for the first time as the journal of the newly founded Society of

Table 1 "Cardiac" articles published in Thoraxchirurgie 1953, issue 1

Authors	Title (translated into English by M.K.H.)	Pages
Krauss H.	Narrowing of trachea and esophagus by congenital malformations of the mediastinal vessels and their treatment	25–33
Wilflingseder P., Halhuber M., Weithaler K.	On the treatment of the callous inflammation of pericardium and pleura	136–145
Steinhardt O.	Clinical and experimental findings on cardiac arrest	222-227
Hueck O.	Congenital aortopulmonary window defect	365-372
Nick J.	On the connection of the pulmonary veins into the left atrium	387-402
Rinck H., Venrath H., Valentin H., Schmitz Th.	Diffusion disturbances of the lungs from long-standing insufficiency of the left heart and from mitral stenosis, as well as some remarks on the operative treatment of mitral valve disease	403-410
Nissen R., Hase O.	Mediastinopericarditis externa, caused by paraffin	480-488

Thoracic Surgeons (STS), and by 1967 Barnard's first attempt at heart transplantation as well as Favaloro's articles on coronary bypass procedures had been published.^{9,10} The 1968 volume of Thoraxchirurgie, Vaskuläre Chirurgie contained 87 articles, 47 being "cardiac." Of note is an article by Schiller and Krepp on experimental myocardial revascularization in dogs, 11 still investigating the potential of indirect angioneogenesis and coming to a negative result. They discuss, however, the urgent need for a surgical therapy of coronary heart disease in the absence of a valid causal medical therapy and thus had their finger at the pulse of time. Other articles deal with congenital as well as valvular heart disease. In thoracic surgery, esophageal procedures keep being covered widely. Vascular topics include the (partial) occlusion of the inferior vena cava to prevent recurrent pulmonary embolism.

1973

In 1971, the German Society for Thoracic and Cardiovascular Surgery was founded and Thoraxchirurgie, Vaskuläre Chirurgie became its scientific journal 2 years later, then publishing 88 contributions, 50 of which had a cardiac subject. This new official function increased the political impact as can be evidenced in the published presidential address of the second annual meeting of the society. In it, Hans Borst advocated the institutionalization of the new specialties, contradicting Nissen's opinion from 20 years' earlier: "The children thoracic, cardiac, and vascular surgery have outgrown the lap of their mother without her realizing the consequences, as is so often true in life... These our opinions may be regarded as revolutionary. Myself I consider them not even original, unless one would view each development initiated in Germany for the first time as new. 12"

1978

Since 1976, ThCVS was publishing 1 yearly supplement covering the abstracts of the presentations at the German annual meeting, a feature still valid today. In 1978, Vossschulte handed over the editor's baton to H.G. Borst in Hannover. By then, the journal had clearly focused on cardiac surgery, accounting for 53 of 81 articles. Having been trained in the United States, Borst immediately improved the internationalization of the journal. He soon achieved acceptance into the Current Contents Clinical Medicine and constant listing in the Science Citation Index by Thomson Reuters on December 12, 1978. The journal has retained this status ever since, which nowadays is reflected by the Impact Factor. With the beginning of 1979, English was made the publication language and a concise version of instructions for authors, which became mandatory, was published in the masthead. More international members were included in the editorial board. Submissions in German and French were still allowed. In case of acceptance, however, the author was responsible for the translation into English before definitive publication. Borst also gave the journal its distinctive English name, well recognized until today: ThCVS. 1979 also saw the first publication of the German society's annual performance statistics of the preceding year, then covering just half a page including one table. 13,14

1983

By 1983, Borst had been successful in making ThCVS also the official journal of the cardiac surgical societies in Austria and the Netherlands. The number of articles had grown to 106 with 75 being cardiac. This was in part due to the publication of the proceedings of an industry-sponsored valve symposium as a second supplement. But even apart from this extra issue, there was a strong emphasis on valvular topics this year. 15-17 However, the announcement of the editor's invention of his famous elephant trunk technique for aortic surgery must not be left unmentioned.¹⁸

1988

H.G. Borst was one of the godfathers of the European Association for Cardio-Thoracic Surgery (EACTS) and became the editor of the associated journal, the European Journal of Cardio-Thoracic Surgery (EJCTS), which was first published in July 1987. ThCVS editorial office therefore migrated from Hannover to Homburg/Saar with Kurd Stapenhorst at the reign. Meanwhile, Great Britain, Spain, and Switzerland had been added to the international society affiliations. The new editor extended and rephrased the instructions for authors. Their restraints made the articles even shorter.

1988 marked the 10th anniversary of publishing the German society's cardiac surgical performance statistics. The importance of this consequent quality control, unique at that time, featured widely in the journal. 19-21 A whole supplement dealt with a new but eventually erroneous development, almost forgotten today.²²

1993

With cardiac surgery celebrating its 40th anniversary, it seems befitting that ThCVS published several outcome-oriented articles on long-term follow-up that year.²³⁻²⁷ It appears that the general interest had moved from the sheer fascination of technical matters to quality of life issues: from the surgeon's to the patient's perspective rather. In thoracic surgery, however, further refinement of operative techniques prevailed with the growing importance of thoracoscopic procedures. A comprehensive editorial was written by Toomes introducing three related original articles.²⁸

1998

In 1996, W.P. Klövekorn, Bad Nauheim, had taken over as Editor-in-Chief from K Stapenhorst, and by 1998 the journal's support of societies now listed Germany, the Netherlands, Great Britain, Spain, Switzerland, and Turkey. The new editor emphasized his interest in basic science in the journal, publishing a second supplement covering the "Symposium on Myocardial Protection: Physiological Principles - Established Techniques - New Strategies," which had been organized in Cologne by E.R. de Vivie and U. Mehlhorn. K.H. Leitz even edited a third (German language) supplement on "rationing in medicine," the summary of a satellite symposium in conjunction with the annual meeting of the German society in Dresden that year. This boosted the whole volume to 106 articles, 76 dealing with a "cardiac" subject.

2003

To introduce the 50th anniversary of *ThCVS*, the historical foreword by Nissen was translated into English and republished.² A lot had changed since then, and the journal with its third name was back to being the scientific publication of the German Society for Thoracic and Cardiovascular alone. There are various reasons for this, not the least of them being the constant thriving of the European society and its associated *EJCTS* in an increasingly competitive market. A total of 76 articles was published in 2003, with the cardiac portion declining somewhat to 46 (60%), probably for similar causes.

With the growing refinements of techniques, the dramatic development of interventional cardiology, as well as changing demographics cardiac surgery was now increasingly offered in high-risk situations, proving its worth.^{29–32} Articles on lung transplantation and the controversial volume reduction surgery show that thoracic surgery was also expanding its horizons.^{33–36}

2008

By 2008, W.P. Klövekorn had introduced several changes to the journal he had been editing for 12 years. 2005 saw Thieme Publishers' implementation of the fully electronic ScholarOne manuscript submission system by Thomson Reuters (http://mc.manuscriptcentral.com/tcsurgeon). Very appropriately, the first article entered this way was of German origin.³⁷ This new tool greatly facilitated the editorial management of the constantly increasing submission numbers which finally led to the extension of *ThCVS* to eight instead of six issues per year in 2006. This added volume is reflected by the 2008 statistics which show 132 articles being published, 71 with a cardiac focus. Unfortunately, basking in success was not granted to the editor for long, who fell severely ill.

2013

When the 60th anniversary of the journal arrived, more profound changes had taken place. Due to the illness of W.P. Klövekorn, which finally led to his untimely death, ^{38,39} a new Editor-in-Chief had to be found in 2010. M.K. Heinemann from Mainz was finally elected by the German society and Thieme Publishers. He started "eFirst" publishing in 2011, which assigns a DOI (Digital Object Identifier) number to an article as soon as the typeset version has been approved. This makes an article fully citable and accessible on the internet before it finally appears in print. In 2012, the publisher suggested a new, more modern layout. It also moved the management together with that of other English language journals to Thieme Medical Publishers based in New York as well as the production team to Noida near New Delhi in India. ThCVS had suddenly become a truly international affair.

To cope with the increasing demands a daughter journal, *ThCVS Reports*, was introduced in December 2012, subedited by A. Böning from Giessen. This publishes the numerous case reports, always popular with the surgical community, in an Open Access format. Sad developments in the world of scientific publishing necessitated the implementation of plagiarism search software.

In 2013, the German Society for Pediatric Cardiology (DGPK) decided to have the abstracts of its annual congress published as a second supplement of *ThCVS*. This can be regarded as a clear signal of the close relationship these two specialties have always had, with cardiac surgery having been "invented" in the 1950s to alleviate congenital heart disease. ⁴⁰ The Swiss Society for Cardiac and Thoracic Vascular Surgery (SGHC/SCC) renewed its association with the journal, and the Austrian society intends to do so in 2014.

The new editor's interest in the secrets of editing a scientific journal led to a presentation at the International Congress on Peer Review and Biomedical Publication, trying to answer the question if readers do actually read what peer reviewers selected for them.⁴¹

Conclusion

With a history now spanning more than 60 years, ThCVS illustrates not only the transformations of the surgical disciplines represented but also those of scientific publishing.^{42,43} The beginning is characterized by a strong focus on thoracic surgery, but the evolving field of cardiac surgery was reflected from the start and gained influence over time. The complete volumes of the journal are electronically archived and accessible to subscribers. They make fascinating reading for those interested in the history of medical publishing. In the 1950s and 1960s, we see the extensive, single author articles written in a language which can, at times, be called almost literary. Then, the proliferation of scientific publishing led to the introduction of rather rigid rules to accommodate the assumed wealth of information. Although the number of words of an original article declined steadily, the number of authors and participating institutions continued to increase. Seen from today's perspective, one might have the occasional ethical concern about some of the surgical approaches of the past. Today, however, we are faced with a totally different menace to science: dishonesty, as displayed in authorship conflicts or even plain plagiarism. The ethical debate has shifted to within the scientific community.

Five editors and the publication of more than 5,400 articles by now have established *ThCVS* as one of the pillars of publishing in the field of thoracic and cardiac surgery. Careful and regular bibliometric analysis and cooperative interchange with fellow editors should provide it with a foundation safe enough to continue building on it.

Note

M.K.H. is the current Editor-in-Chief of *The Thoracic and Cardiovascular Surgeon*.

Disclosures

- 1. Part of this material has been presented at the 45th Cardiac Surgical Symposium, Rottach-Egern, Germany, November 2, 2013.
- 2. This article contains data from MT's doctoral thesis (MD).

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