

# Publication rates of scientific presentations in Turkish national radiology congresses

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## PURPOSE

To investigate the publication rates of scientific presentations in Turkish radiology congresses.

## MATERIALS AND METHODS

The abstracts of presentations at Turkish national radiology congresses between 1995-2002 were reviewed. According to the congress abstract booklets, types of the presentation (oral or poster presentation), as well as body system-based categorization were used. The presentations were searched for publication in Medline® indexed journals using the PubMed® server. The rates of publication of the abstracts, the journals in which the presentations have been published and the time between the presentation and publication were investigated.

## RESULTS

An overall number of 521 publications were found originating from 4,413 presentations (11.81%). The publication numbers of 2,116 scientific research, 1,995 case report and 302 educational exhibit type presentations were 261 (12.33%), 249 (12.49%) and 11 (3.64%), respectively. For oral presentations the publication ratio was found as 15.38% (116/754) and for posters it was 11.06% (405/3,659). The number of presentations and the number of publications were found to increase by years, however the ratio of publication to presentation remained the same. Mean time to publication was calculated as 24.4 months. In frequency of publication, Tanisal ve Girişimsel Radyoloji, European Radiology, European Journal of Radiology were the first three publication media of the presentations.

## CONCLUSION

The publication rates of abstracts presented at Turkish national radiology congresses are lower than the previously reported publication rates in radiology and other specialties.

*Key words:* • presentation • publication • research

Congresses are the platforms where scientific studies are presented and the data are shared and opened up to discussion. Scientific studies are presented in the form of oral or poster presentations at congresses. Scientific presentation is an effective and valuable method for rapidly conveying new information from recently completed or continuing studies to the scientific community. The subsequent publication of a study that is presented at a congress is commonly considered to be the ultimate conclusion of it (1-10). In addition, the publication rate of presentations are claimed to be the indicator of the scientific quality level of a congress (1-3). However, there is a series of factors, other than the quality of the research, which can affect the publication rate of presentations (11, 12). The publication rate of presentations in different medical branches varies between 11% and 78%, with an average of 45% (1-10). A small number of studies that were performed in the field of radiology revealed the presentation publication rate to be between 29% and 37% (1-3).

The aim of this study was to investigate the publication rate of the presentations at Turkish national radiology congresses.

## Materials and methods

All of the presentations submitted to Turkish national radiology congresses between 1995 and 2002 were reviewed, taking the congress brochures into consideration. The presentations were classified as poster and oral presentations and were also classified according to radiological subspecialties. In addition, the presentations were classified as case reports, scientific research, and educational exhibit type presentations. The international publication rate of the presentations was evaluated with June 2004 being the cut-off date. The distribution of the published presentations according to the above classification, publication rates, and the length of the publication process were determined.

The research was conducted by searching Medline® on the Internet using the PubMed® (<http://www.ncbi.nlm.nih.gov>) database. PubMed® search was performed using the first name initial and the full last name of the leading author. When this failed, same search for the second author was performed. When there were more than 20 results for the search, the last name of the second or last author who was referred to in the abstract, or a key word (that could make the search easier) was used in addition to the first author.

The abstracts that were withdrawn were not reviewed. In the case of multiple presentations by a particular author or group submitted repetitively with altering data such as increase in number of patients, only one of the presentations was covered by the study. Replicated presentations originating from the same study were also counted as one. Presentations that were published before the congress was held were included in the

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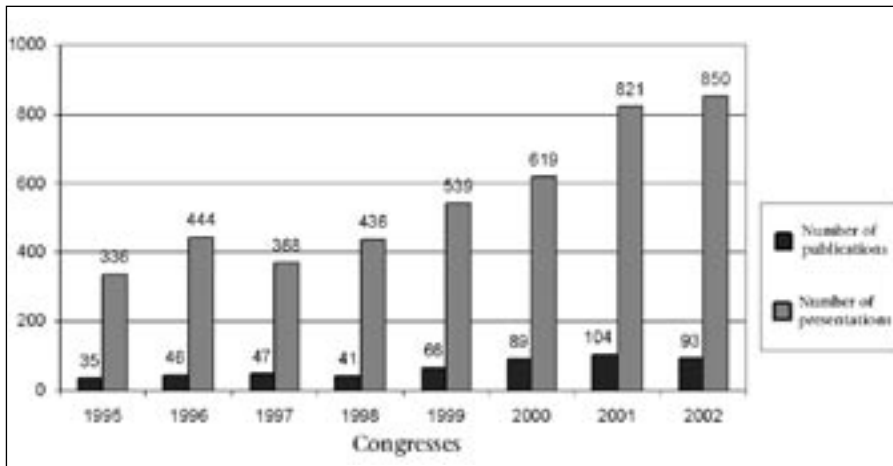


Figure 1. Distribution of the presentations according to year (between 1995-2002) and the number of publications.

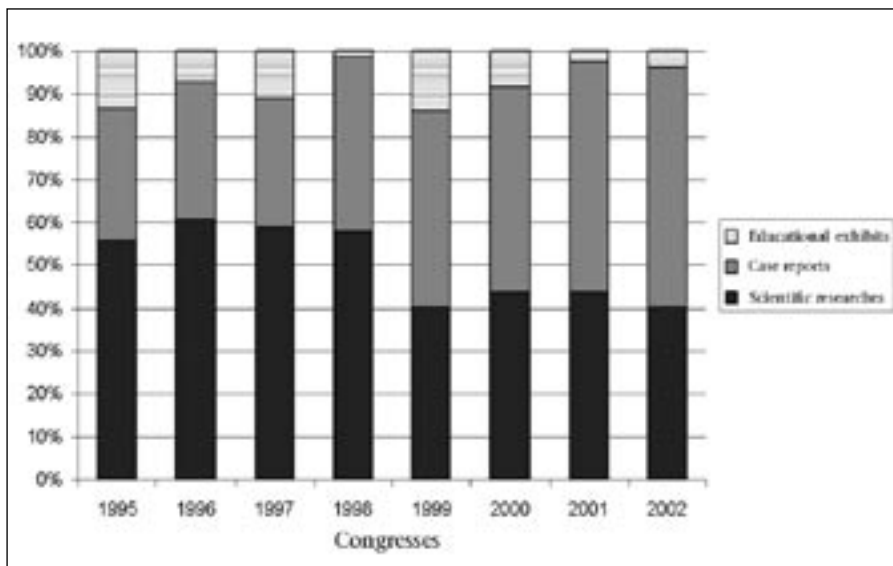


Figure 2. Classification of presentations by content.

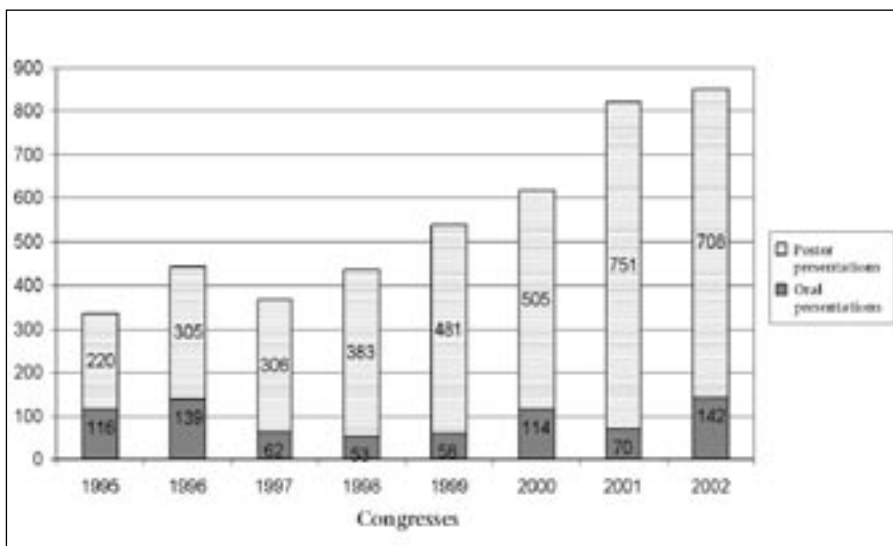


Figure 3. Distribution of presentations by type (oral or poster presentation).

study and their publication period was accepted as 0 months. The data herein is presented without quoting names, institutions, provinces, or regions.

## Results

The presentations in Turkish radiology congresses within an eight-year period between 1995 and 2002 were included in the study and the number of presentations that were published are shown in Figure 1.

A total of 4,413 papers (754 oral and 3,659 poster) were presented at the congresses. Of all, 2,116 of them were scientific research, 1,995 were case reports, and 302 were educational exhibits. While the scientific research presentations took the publication rate lead during the first four years of the evaluated process, case reports dominated in the most recent years (Figure 2).

The publication rates in international journals were as follows: 116 out of 754 oral presentations (15.38%); 405 of 3,659 poster presentations (11.06%); and a total of 521 of all (11.81%). The rates of publication in journals registred with Medline® were 12.33% for the scientific research presentations (249), 12.48% for case reports (11), and 3.64% for the educational exhibits (11). Recently, there was a significant increase in the total number of presentations, which included mostly poster presentations (Figure 3). However publication rates have not increased as much and varied between 9.4% and 14.38% during the same period (Figure 4). The highest presentation/publication ratio was in 2000 and the lowest was in 1998. In quantity, abdominal radiology presentations were the most published, whereas vascular interventional presentations had the highest publication ratio (Figure 5).

The period between presentation and publication was 0-91 months with an average of 24.4 months. The presentations were mostly (n=74) published in *Tanisal ve Girisimsel Radyoloji* that was included for coverage in Index Medicus in 2003. This journal was followed by *European Radiology*, *European Journal of Radiology*, *Journal of Clinical Ultrasound*, *Clinical Imaging*, and *American Journal of Roentgenology*, in terms of publication frequency. The journals that published the presentations and the number of publications are shown in the Table.

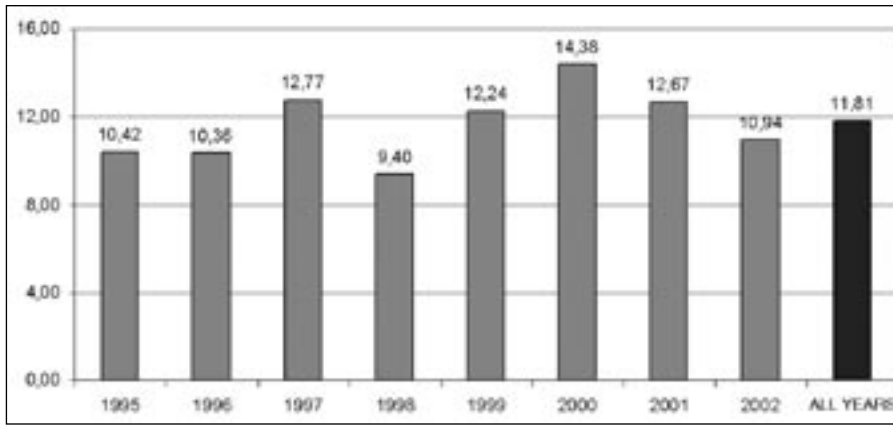


Figure 4. Publication ratio of the presentations (%).

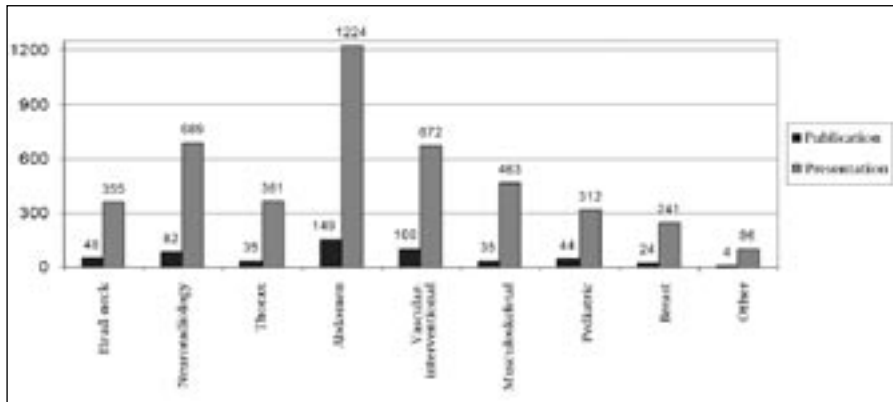


Figure 5. Number of presentations and publication rates according to radiology subspecialty.

## Discussion

At Turkish national radiology congresses, presentations are classified into two main types as oral and poster presentations. Nearly all of the oral presentations are based on original scientific research. The poster presentations may be scientific research, case reports, or educational exhibits. Educational exhibits are prepared in

a form that is called “state-of-the-art” or “review” in international literature and congresses, and they elaborate on a subject or method based on clinical cases. All of the presentations are subject to system-based classification in the congress brochures (1, 2). Although the system-based classification varies somewhat depending on the particular congress; neuroradiol-

ogy, head and neck, thorax, breast, musculoskeletal, abdomen, pediatric, vascular and interventional radiology, and radiology’s other categories are usually accepted for classification. In our study, the classifications used in congress brochures were adopted.

The number of oral presentations varied depending on the year of the congress. There has been a significant increase in the number of poster presentations and a consequent increase in total presentations. The total number of presentations has exceeded 800 annually in recent years. Additionally, there has been a tendency towards an increase in the number of the published presentations over the years, although the ratio of the published presentations did not go hand in hand with the increase in the number of presentations. The publication ratio did not show any change despite the increase in the number of presentations since the number of published presentations has increased in accordance with the total number of presentations. The relatively low results for the year 2002, which gives the impression of a decreasing rate of publication, may actually be attributed to the incomplete publication review process of the presentations as a result of the short amount of time that has passed since 2002. Oral presentations have a greater chance of getting published when compared with poster presentations. Oral presentations are usually expected to contain studies of original content, whereas poster presentations are more likely to contain secondary research, case reports, and exhibits. The potential of a study containing original content to be published is higher in comparison with other types of studies. However, oral presentations are always less in number compared to poster presentations. Accordingly, higher publication ratios for oral presentations is a likely consequence. However, the fact that only 15% of the oral presentations containing original content was published in the international literature is surprising. While scientific research presentations took the lead in the rate of publication during the first four years we evaluated, case reports have dominated in recent years. Scientific research presentations and case report presentations were similar in number and ratio in terms of publication. It is difficult to determine

Table. Journals in which the presentations are published and the number of publications

Journal	Number of publications
Tanisa ve Girisimsel Radyoloji	74
European Radiology	51
European Journal of Radiology	39
Journal of Clinical Ultrasound	29
Clinical Imaging	28
American Journal of Roentgenology	25
Acta Radiologica	19
Neuroradiology	18
Computerized Medical Imaging and Graphics	15
Journal of Ultrasound in Medicine	12
American Journal of Neuroradiology	11

if this similarity was due to low quality of the scientific research presentations or the originality of the case reports. Only a small percent of educational exhibits were published. This educational category, which is of special importance in international congresses, either lacks the optimal environment to be published or has been neglected in the publication process.

Publication of a congress presentation is defined as the ultimate goal of a scientific research (1-10). The publication ratio of the presentations was examined for various disciplines and the average result, according to Cochrane Library data and meta-analysis, was reported to be 45% (13, 14). There exists only a small amount of research concerning this matter in the field of radiology. According to a study that covers the radiology congresses held in Australia and New Zealand between 1996 and 1999, 29% of the presentations were published (2). According to a recent article which examined the publication ratio of the presentations from the 1995 congress held by Radiological Society of North America (RSNA), the publication ratio was 33% (1). The ratio for the presentations from a neuroradiology congress of 1993 was 37% (3). The publication ratio for Turkish national radiology congresses (11%) is well below these values. Presentations in the form of "abstracts" that were accepted at Turkish national congresses had strict word count limitations. Reviewing the study according to a short abstract, of course, has its limitations, too. Naturally, when a study is to be internationally published, a selection process ensues, which examines the entire study, down to the smallest detail. This methodological difference is considered to be the main reason that certain congress presentations are not published, and it is believed that the abstracts in congress brochures should not be referred to in the articles (3).

The period of time it takes for presentations to be published was reported to be an average of 17 months (2). In our study, this period was considerably longer with an average of 24 months. Research has been conducted on possible barriers that prevent presentations from being published (11, 12). The reasons brought out by these studies are limited time, lack of faith in the studies' quality for publication, lack of faith in the importance of the results of the

studies, disputes among the researchers, and the presence of other articles that provide identical results. For Turkish presentations, the limited number of Turkish journals in the international indexes, the necessity of translating the presentation from Turkish into foreign languages, and the difficulties that are experienced during the translation process may have been responsible for the delay in the time of publication that our study uncovered.

*TanisaI ve Girisimsel Radyoloji* was included in Index Medicus in 2003 and has since become available online (15). According to the results of our study, this journal is the medium where presentations from Turkish congresses have the best chance of being published frequently. Thanks to the journal's being searchable by Medline®, the presentation-publication ratio is expected to be significantly higher in the following years when compared with the current ratio.

Turkish national radiology congresses have educational, social, and financial goals. Distributing and updating information, presentation of scientific research, sharing and discussing new information that is obtained from recently completed or continuing studies, demonstration of products by individuals or institutions, and the opportunity for specialists-in-training to acquire the ability to prepare presentations and present them can be counted among the educational goals. The social goals include communication among colleagues, facilitation for discussion of occupational issues, and participation in social programs. The financial goal is the income that is generated by the institutions that organize the congresses. Large numbers of participants are important in this context. However, encouraging participation by means of accepting a large number of presentations is not considered to be an appropriate method. This method inevitably results in a deterioration of presentation quality and decreases the presentation-publication ratio.

Adopting a selective approach in accepting presentations, or focusing on publication time efficiency may result in an increase in the presentation-publication ratio. Shortening publication time, providing support and incentives for publication (e. g., board point, prize or incentive in return for publication, and professional help

with translation), elimination of the restricting factors that may be experienced during publication review (e. g., creating spare time to write an article, avoiding replicated articles, and setting policies to cope with the disputes that may arise among the researchers) are possible solutions. However, when the goals of congresses are taken into consideration, it is understood that the perception that the congresses are an opportunity to form study groups and communication networks, joining together the case reports and the studies that share a subject, and forming a multi-centered base for study are of the greatest importance.

Our study has its limitations. The main limitation is evaluating a national congress by using an international database. Unfortunately, there is no database that could search all of the journals that are published in our country. The database that was created by a state-operated organization (ULAKBİM) and named Turkish Medical Index does not contain all of the journals that are published in Turkey due to its inclusion criteria. Accordingly, it is impossible to effectively determine if a particular presentation was nationally published. In addition, detailed searches that were necessary for this study in the above-mentioned database would have been very difficult and time consuming. Therefore, PubMed®, with its ability to search the commonly acknowledged Medline®, was chosen as the search media. The second limitation of the study is the possible search errors. These errors may have resulted from misspelling the names of the authors, which appeared in the congress brochures, or had occurred merely as a result of faulty search. Every effort was made to minimize these errors. The third limitation is the inability to determine the publication possibility of such a presentation when the first and second names are omitted due to the method of the study. In conclusion, the international publication ratio of scientific presentations of Turkish radiology congresses was demonstrably lower than those made at congresses outside of Turkey, regardless of radiology subspecialty. In addition to the emphasis that must be given to publication-time efficiency, the adoption of an effective selective procedure for the acceptance of presentations may result in an increased publication ratio.

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