Turkey’s 2009 output of cardiovascular publications shows a four-year regression

Mekanik mitral kapak değişimi sonrası gelişen protez kapak-hasta uyumsuzluğу ve sistolik pulmoner arter basıncı üzerine etkisi

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The output of publications in cardiovascular medicine during 2009 originating from Turkey’s institutions was evaluated based on data of the Web of Knowledge. Only original articles and reviews appearing full-text in source publications of Science Citation Index CD Edition were included. A weighted credit system was used for items published jointly by multiple departments or with a noncardiology Turkish institution. Turkey’s publications declined substantially to 167 articles and reviews, with a parallel decrease in her share of world publication from 10.8 to 8.2 per mille. Six-sevenths of the output originated from adult cardiology. The median impact factor of 2.18 was higher roughly by 17% than in the previous year; half of the publications appeared in periodicals with an impact factor of 1.27 to 3.12, reflecting a consistent qualitative improvement. University medical faculties persisted to lag behind in productivity, while the Gülhane Military Medical Academy led by far, runners-up being the Turkish Society of Cardiology, Kartal Koşuyolu Training and Research Hospital, and medical faculties of Başkent University and Istanbul University.

Key words: Cardiovascular publications; Turkey; impact factor.

Putting more emphasis on consumption instead of thriving to become a producing community can only bring short-term, and basically an ineffective progress. Economic progression can only be possible by globally competing with the frontrunners. The fundamental way of doing this is to bring about creative innovations in the field of science and technology. By the year 2004, we had entered a rapid period of progress in scientific publications for the preceding 18 years. A similar development was registered in the field of cardiology. However, various indications show that we have entered a period of net regression in scientific publication for the past five years, compared to the rapid progression of previous years. [4]

It is normal for this cloudy condition to arouse great interest for the future about the course of activities in the field of cardiovascular medicine. Such evaluation can not possibly depend on an absolute number; however, evaluation should be made on yearly changes in the number of publications based on the Web of Knowledge data, standardizing this increase and also evaluating the quality and quantity of the journals in which our article are published by analyzing their impact factors.

Anahtar sözcükler: Kardiyoloji yayınları; Türkiye; impact faktörü.

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In this paper, highlight has been made of the status of our international publication in the field of cardiovascular diseases in the year 2009 and comments on the last year performance of journals in which they were published and also of our various institutions. A full list of full-text article references that have been published in international journals has also been included so that our colleagues working in a similar field may also get some benefit.

METHODS

In the Web of Knowledge service published on the Internet by the Thomson Reuters Institute for Scientific Information, a total of 24200 registered articles were found were found in the 2009 “addresses” section under the topic Turkey. Articles submitted from Turkey were individually analyzed during a three-week period. In addition to the journal that was published information was obtained from the reference institution and department which was indicated in the address provided, in order to identify articles dealing with cardiovascular medicine. A half score was given to a joint publication of the Turkish Society of Cardiology and a foreign based center or a local non-cardiology institution. Fractional points were allocated when necessary for the impact of cardiology institution according to the position and number of authors. More credit was given to the first author when authors were from different departments of the same faculty. Journals and editorial materials which were not listed in the Thomson Reuters ISI publication edition, summary of meetings and letters to the editor were excluded, leaving behind 167 full-text articles and review publications including adult cardiology, cardiovascular surgery and pediatric cardiology.

RESULTS

In this evaluation only full-text article and reviews are termed “articles”. A total of 1.45 million publications were included in the online search of the Science Citation Index Expanded; however, a total of 1.76 million publications were registered since an average of 1.23 countries was given in the references. 13.6 per mille of this (24,197) were of Turkish origin (Table 1). There was a worldwide increase of 0.6% in 2009 in the total number of publication searched by Science Citation Index (SCI), compared to the previous year. Of the 178 articles published in 2009 on cardiovascular medicine 170 were related to the field of cardiovascular medicine, (Table 2). Of the 167 articles evaluated, 142 were for adult cardiology, 20 for cardiovascular surgery and 5 for pediatric cardiology. Reference information of the 178 articles mentioned is provided as an appendix. Approximately 20,400 cardiovascular medicine articles are estimated to have been registered worldwide, in the SCI CD edition of 2009; the world quota of our publication was found to regress from 10.8 per mille in 2008, and 8.2 per mille last year.

The institutional sources of our cardiovascular medicine articles are shown in Table 2. The Gülhane Military Medical Academy (GATA) led by far this year with 24 articles, followed by the Turkish Society of Cardiology, Kartal Koşuyolu Training and Research Hospital, and medical faculties of Başkent University and Istanbul University with 6-to-9 articles. A total of 58 institutions contributed in large and small ways in the production of articles.

The names and impact factors of the 48 journals where our science articles are published are summarized in Table 3. Evaluation of the impact of our articles demonstrates that the median impact factor of these periodicals was 2.18 (one-fourth range of 1.27-3.12). The seven most preferred journals by our authors took a 60% share of our publications. These periodicals include Angiology, Thorac Cardiovasc Surg, Clin Cardiol, Int J Cardiovas Imaging, PACE, Coron Artery Dis and Int J Cardiol. Last year only 76% (10.4) of our articles were published in journals with an impact factor of ≥3.5.

DISCUSSION

This study shows that the number of internationally high profile publications of the cardiovascular medicine community in Turkey and her share of world publication declined substantially in 2009 by approximately one-fourth compared to the previous year. This decline in the number and world share in publications of our 2005 cardiology performance is a great matter or concern. This year’s considerable improvement in the impact factors of the journals publishing our studi-

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**Table 1. Science and cardiology publication produced in Turkey in 2008 and 2009**

<table>
<thead>
<tr>
<th></th>
<th>2009</th>
<th>2008</th>
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<tbody>
<tr>
<td>Science and technology publication*</td>
<td>24,197</td>
<td>23,505</td>
</tr>
<tr>
<td>Science and technology article§</td>
<td>19,494</td>
<td>18,518</td>
</tr>
<tr>
<td>Cardiovascular medicine article¶</td>
<td>167</td>
<td>220</td>
</tr>
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</table>

*Data for online SCI Expanded; §Data including press edition; ¶including reviews
Table 2. Distribution of Turkish cardiovascular medicine publications according to department and institution which were released in 2009 in the journals searched by SCI

<table>
<thead>
<tr>
<th>Institutions</th>
<th>Total</th>
<th>Cardiology</th>
<th>Card. surgery</th>
<th>Ped.card.</th>
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<tr>
<td>Gülhane Military Medical Academy (Haydarpaşa, Ankara)</td>
<td>24.1</td>
<td>22.3</td>
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<td>Turkish Society of Cardiology</td>
<td>9.25</td>
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<tr>
<td>Kartal Koşuyolu Training and Research Hospital</td>
<td>7.5</td>
<td>7.5</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Başkent University Faculty of Medicine (Ankara, Adana, Konya)</td>
<td>6.16</td>
<td>5.83</td>
<td>0.33</td>
<td>-</td>
</tr>
<tr>
<td>Istanbul University Faculty of Medicine</td>
<td>6.1</td>
<td>4.1</td>
<td>2</td>
<td>-</td>
</tr>
<tr>
<td>Siyami Ersek Thoracic and Cardiovascular Surgery Center</td>
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<td>Marmara University Faculty of Medicine</td>
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<td>Göztepe Şafak Hospital</td>
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<td>Balikesir University Faculty of Medicine</td>
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<td>The other 7 institutions</td>
<td>2.75</td>
<td>2.25</td>
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</table>

SCI: Science Citation Index
es is a little bit consolatory. Among the research institutions GATA was in the lead, followed by the Turkish Society of Cardiology, Kartal Koşuyolu Training and Research Hospital, and medical faculties of Başkent University and Istanbul University. On the other hand, journals allocated a low quota by Science Citation Index-Expanded published about 400 articles from our institutions; however, it is worth mentioning that these journals do not meet the criteria outlined in our method.

The year 2009 saw a stable number of the journals registered in SCI; however, Turkey’s publications in cardiovascular medicine declined substantially by a share of the world publication from 10.8 to 8.2 per mille. Our mean world share of science publications during the 2001-2004 period was 7.1 per mille (Figure 1). However, our inability to get over this value when we were supposed to double our performance should intimidate those responsible. This evaluation holds for adult cardiology as well as pediatric cardiology and cardiovascular surgery.

In terms of benefit for the community and technology trust is given more to the consequential effect, or rather still the allocated citation of scientific publications, instead of the number of publications. The qualitative improvement obtained this year is a significant consolation. The 25 and 75 percentile value with regards to the impact factor of journal published increased in 2009 by one-sixth as compared to the previous year, from 1.27 to 3.12. According to estimations of new publications for citations of the subsequent period, the number of citations expected for 2008 was 410, whereas citation of 340 publications was estimated for 2009. This indicates a decline in the expected global impact for this year.

Special interest to a small portion of international journals by certain colleagues continues. There has been an increased concentration in the seven journal publishing 61% of the studies (impact factors of 1-3 ranging from Angiology to Int J Cardiol). The publication of 51 articles in the Int J Cardiol may have been due to special publication policies of the journal, which should not be expected last into next year. Majority of the good, valuable and informative Turkish studies which may not

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**Table 3. Journal and their supplements which published our cardiovascular medicine article in the year 2009**

<table>
<thead>
<tr>
<th>Number</th>
<th>Name of journal</th>
<th>Impact factor*</th>
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<tbody>
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<td>1</td>
<td>J Am Coll Cardiol</td>
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<td>Ann Med</td>
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<td>J Hypertens</td>
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<td>Atherosclerosis</td>
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<td>Heart</td>
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<td>0.2</td>
<td>Am Heart J</td>
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<tr>
<td>0.5</td>
<td>Int J Obes</td>
<td>3.64</td>
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<tr>
<td>1.85</td>
<td>Am J Cardiol</td>
<td>3.60</td>
</tr>
<tr>
<td>2</td>
<td>Nutr Metab Cardiovasc Dis</td>
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</tr>
<tr>
<td>2</td>
<td>J Cardiovasc Electrophysiol</td>
<td>3.48</td>
</tr>
<tr>
<td>1</td>
<td>Clin Nutr</td>
<td>3.20</td>
</tr>
<tr>
<td>1</td>
<td>Diabet Med</td>
<td>3.17</td>
</tr>
<tr>
<td>2</td>
<td>Am J Hypertens</td>
<td>3.12</td>
</tr>
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<td>50.9</td>
<td>Int J Cardiol</td>
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</tr>
<tr>
<td>3</td>
<td>Metabolism</td>
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<td>Obesity</td>
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<td>Cardiovasc Drugs Ther</td>
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<td>1.75</td>
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<td>3.5</td>
<td>J Am Soc Echo</td>
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<td>3</td>
<td>Eur J Cardiothorac Surg</td>
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<tr>
<td>1</td>
<td>J Cardiovasc Pharmacol</td>
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<td>Int J Clin Pract</td>
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<td>Platelets</td>
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<tr>
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<td>Cardiology</td>
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<tr>
<td>1</td>
<td>Cardiovasc Pathol</td>
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<td>2</td>
<td>Clin Chem Lab Med</td>
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<td>Blood Press</td>
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<td>PACE</td>
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<tr>
<td>7</td>
<td>Coron Artery Dis</td>
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<td>Swiss Med Wkly</td>
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<td>Am J Med Sci</td>
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<td>Int J Cardiovas Imaging</td>
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<td>3</td>
<td>Scand J Clin Lab Invest</td>
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<td>2</td>
<td>Tohoku J Exp Med</td>
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<td>Catheter Cardiovasc Interv</td>
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<td>6</td>
<td>Angiology</td>
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*Impact factors for 2008 (a small portion for 2007)

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**Figure 1.** The nine-year progress of the number (bars) and our world share per mille (lines) between 2001-2009 for our high profile and international articles.
Turkey’s 2009 output of cardiovascular publications shows a four-year regression

meet the criteria set by the Western community, which controls most journal publication laws, often get rejected through a pre-elimination process without reaching the referees. The situation may be contributing to our publication concentrating in particular journals.

Our most prominent authors who played a leading role last year were H. Bozbas, E. Sade, and S. Eroglu once more from the Başkent University team. M. Sezer from Istanbul Faculty of Medicine drew great attention with the long-term study. S.A. Kocaman and A. Abacı from Gazi University and M. Fazlıoğlu from Uludag University and also I. Taşı and T. Celik from GATA also produced important studies. The N.Erginel-Unalta team from Istanbul Faculty of Medicine produced genetic research in the field of cardiology.

Başkent University and GATA stand out as the most successful of our institutions for last year. Although many members of the team surrounding H. Muderrisoglu have been lost the continued productivity is praiseworthy. Istanbul and Gazi Universities, although not quantitative, have been qualitative studies. The TARB study, which produces research for the Turkish Society of Cardiology has occupied second place and has maintained its position at the forefront of the community of cardiovascular medicine for the 2009 calendar year, with a total of about 205 citations by the SCI. Studies by T. Celik (and partly A. Iyisoy) from GATA has with 17 registered short reports of 2-3 pages in the Int J Cardiol, but doesn’t seem to be a candidate attracting great attention.

What can also be said about the fact that half of approximately 60 faculties of Medicine have not produced even one high quality publication for a whole year? Is it also exonerating that half of the Faculties which have been active for the past 30 year can not boast of a performance of producing a modest three articles per year?

Respected hospitals of the Ministry, especially the Turkish Higher Training and Research Hospital are known to have been buried in routine for the past two years, in the field of cardiovascular medicine. The political government and the Council of Higher Education should realize that we are experiencing a deadlock in the area of science as a whole and should take steps towards creation of a scientific environment in order to compensate for the 5-year recession.

It has been concluded that Turkey has experienced a substantial decline of about one-fourth in the number and world share of publications in 2009 in the field of cardiovascular medicine. On the other hand, the increased impact factor of article published compared to the previous year is considered as a consolation. GATA, Kartal Koşuyolu Training and Research Hospital, Başkent and Istanbul Universities, and the Turkish Society of Cardiology have stood out as institutions with the highest performance. An appeal has been made for those responsible to take serious and effective measures in order to alleviate the 5-year recession period in which Turkey finds itself.

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APPENDIX

2009 Publications of Turkish Cardiovascular Medicine

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Turkey’s 2009 output of cardiovascular publications shows a four-year regression


Çelik T, Ilyasoy A, Çelik M, Baysan O, Bek S, Doğru MT: A case of Guillain-Barré syndrome follo-


Turkey’s 2009 output of cardiovascular publications shows a four-year regression


Kard. Yalçın F, Mürdersoğlu H: Tako-tsubo cardiomyopathy may be associated with cardiac geometric features as observed in hypertensive heart disease. Int J Cardiol 135:251-2


Turkey’s 2009 output of cardiovascular publications shows a four-year regression


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Ankara Ü.

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Bezm-i Alem Gureba C. Bayar Ü.

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GATA

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Göztepe Şafak H.

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Marmara Ü.

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S. Demirel Ü.

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Uludağ Ü.

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Cumhuriyet Ü.

Ped. Kard.


½ GATA

Ped. Kard.

Zeybek C, Aktuğlu-Zeybek Ç, Önal H, Altay S, Erdem A, Çelebi A: Right ventricular subclinical dias-

½ Siyami Ersek

Ped. Kard.


Ondokuz Mayıs Ü.

Ped. Kard.


Ankara Ü.

Ped. Kard.


C. Bayar Ü.

Ped. Kard.


Hacettepe Ü.