Cochrane Reviews in Obstetrics and Gynecology: What is the Contribution of Indian Studies?

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About the Author

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Abstract

Background Cochrane reviews aim to produce evidence for health care practice globally including India. We wanted to assess the contribution of Indian origin studies in developing these systematic reviews in the field of obstetrics and gynecology.

Objective The objective of this study is to determine the number of Indian origin studies in obstetrics and gynecology which provided conclusive data and hence contributed toward formulating Cochrane Reviews in Obstetrics and Gynecology.

Methods A total of 910 Cochrane reviews were accessed from gynecology and pregnancy and child birth list from Cochrane health topics. The details of studies included for each review were accessed from references section. Indian origin studies were then identified from this for further analysis.

Results Of the total 910 Cochrane reviews available on the subject of obstetrics and gynecology, 93 reviews had 225 studies of Indian origin. In the subject-wise categorisation, there were 404 and 506 systematic reviews in Gynecology and Obstetrics respectively. Indian studies were included in 32 and 61 systematic reviews of Gynecology and Obstetrics respectively. Regarding the details of 225 Indian studies included for our analysis, 162 were related to Obstetrics and 63 to Gynecology. The place of study could be ascertained in 81 of the 225 studies despite extensive search. Studies published after 1980 are available in the electronic databases while the earlier studies are difficult to access. Studies with duplicate mentions were counted once.

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Conclusions There is an urgent continuing need for high quality research and its publication in India in the field of obstetrics and gynecology. Awareness building measures amongst Obstetricians and Gynecologists in this regard need to be addressed. Better quality studies are especially required in specific areas posing a challenge to our country, to improve the health care practices.

Keywords Obstetrics · Gynecology · Cochrane · Contribution · Authors · Indian · Studies

Background

Application of the best available evidence in clinical practice ensures a high standard of patient care. Recent rapid progress in the field of information and technology has enabled easy access to literature. There has been a global awakening to the role of evidence-based medicine (EBM) including India. Today, clinical studies are seen as the backbone of systematic reviews [1]. Systematic reviews are essential foundations of evidence-based medicine. They provide high quality evidence from which clinical guidelines and public health policies can be developed. Primary studies are important raw materials for systematic reviews and their quality and quantity directly affect the systematic reviews. Lack of good scientific design and plan, as well as, methodology training and guidance added with lack of funds limit the production of high quality local research. Since most primary studies are produced from countries like US, UK, Canada, their application to low and middle income nations is limited due to differences in application conditions [2].

Considering its application in the Indian scenario, it is also important to understand what part of this evidence was generated from Indian studies. Our country has a huge number of research studies churned out every year. The quality of these studies has to be good enough and also these need to be published to qualify for inclusion in systematic reviews.

The Cochrane Collaboration is a group of voluntary researchers who got together to work for the synthesis of this evidence. We sought to quantify the proportion of Cochrane evidence related to obstetrics and gynecology practice originating from India.

Objective

To identify Indian origin studies in obstetrics and gynecology that qualified for inclusion in Cochrane Systematic Reviews, thereby contributed to conclusive evidence synthesis.

Methods

Access to the Cochrane database has been made available for free in India by Indian Council of Medical Research (ICMR). We searched the Cochrane Database of Systematic Reviews by health topics from 15th February to 15th March 2014 for reviews relating to obstetrics and gynecology. Two independent researchers (AGR and NS) extracted the data which were then compiled. Total of 910 Cochrane Reviews related to Obstetrics and Gynecology were accessed. Of these, 404 and 506 reviews were related to Gynecology and Pregnancy and Childbirth, respectively. The author details of included studies for each review were then accessed from references section. Studies identified as Indian origin through author affiliation were extracted. A matrix chart was then constructed to note the title of study (hence categorized subject-wise) place of origin of the author team, number of participants in each study, citations for the study (Fig. 1).

Only completed reviews were included, reviews in protocol stage were excluded.

Data Extraction

The abstract and or full text of each included study was checked to determine the likely country of origin. The decision was based on participating hospital and centers and the affiliation of authors. Sources used to gather information about the studies were published studies from Pubmed, data from trial registries, Google Scholar, ISI web of knowledge and the websites of the journals publishing the included studies.

Fig. 1 Flowchart showing summary of the study

Fig. 2 Place-wise distribution of studies in gynecology **Fig. 3** Place-wise distribution of studies in obstetrics

Data Analysis

Microsoft Excel 2010 was used for data analysis and presentation.

Results

Of the total 910 Cochrane Reviews available on the subject of Obstetrics and Gynecology, 93 systematic reviews, 32/404 belonged to Gynecology and 61/506 in Obstetrics.

There were 225 Indian studies, 162 Obstetrics and 63 in gynecology included in the 93 systematic reviews. The place of study could be ascertained in 81 of the 225 studies despite extensive search. We found that studies published

after 1980 are available in the electronic databases while the earlier studies are difficult to access.

Most studies included for analysis originated from medical colleges with the maximum number from Delhi (Figs. 2, 3). The focus in gynecology was subfertility and fertility regulation, each having 17 and 14 studies, respectively, while there were 23 and 25 studies each for role of prostaglandins in obstetrics and in postpartum hemorrhage, with duplicating mentions (Figs. 4, 5). Studies with duplicate (or more) mentions were only counted once. There were 16,169 participants in Gynecology and 12,7632 in Obstetrics. The cited frequencies of the studies ranged from 3 to 30 for studies in Gynecology while that for Obstetrics was up to 119. Studies undertaken in the years 2001–2010 constituted the highest numbers to be included for reviews.

Fig. 4 Topic-wise distribution of studies in gynecology

Discussion

The Cochrane Collaboration, a non-profit academic organization was established to produce and disseminate high quality medical evidence in 1993. Since then, there has been a steady growth in the publication of full reviews. The accessibility of reviews in India improved with free access to full text made available by the Indian Council of Medical Research in 2007. More than half the Reviews are produced in high income countries [3]. Understanding the process of systematic reviews is still in its developmental stages, particularly among the obstetricians and gynecologists of India. The diversities between the medical needs and resources of various countries based on the average income, are relatively large. Hence, conclusions of a systematic review from a high income nation may not be relevant in low middle income country. Even for countries with similar economic status, the health problems faced might be different due to varied socio-cultural and genetic factors. Hence, many of the studies may not be cited. Evidently, it is also very important to develop local evidence and communicate the same widely. Delhi is the major contributor to Indian pool of clinical studies in obstetrics and gynecology. Most studies in Delhi originated from All India Institute of Medical Sciences followed by the other Delhi medical colleges. Trial registers proved to be a poor source of additional information reflecting the fact that the usage of trial registers is still low.

Limitations and Strengths

Our analysis is restricted to studies used for reviews conducted within the framework of Cochrane Collaboration. The search was only through electronic resources; hand-

Fig. 5 Topic-wise distribution of studies in obstetrics

searching might have resulted in more number of author affiliations being identified.

The present study is possibly the first attempt to add objectivity in the field of obstetrics and gynecology to assess the contribution of Indian studies toward generating evidence.

Conclusions

There is an urgent continuing need for high quality research and its publication in India. Going by the miniscule contribution of the studies of Indian origin, it is evident that awareness building measures among the obstetricians and gynecologists is urgently needed. Better quality studies are especially required in specific areas that pose a challenge in our country to improve healthcare practices.

Compliance with ethical requirements and Conflict of interest This article does not contain any studies with human or animal subjects performed by the any of the authors. The authors share no conflict of interest.

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