

Original article

Importance of Journal club as an effective teaching learning tool

Dr Shivmurti Khandalkar*, Dr Banyameen M Iqbal **, Dr Hetal K Rathod***,

Dr Archana C Buch. **, Dr Madhur Raimule ***

*Department of Surgery, **Pathology and ***Community medicine, Dr. D.Y Patil Medical College, Hospital and Research centre, Pimpri, Pune – 411018, India.

Corresponding author: Dr Banyameen Iqbal, Associate Professor, Dept of Pathology, Dr D.Y Patil Medical College, Hospital and Research Center, Pimpri, Pune – 411018, India

Abstract:

Background: Journal club (JC) is a group of academicians who meet regularly to critically appraise published medical papers. There is a need to elicit the views of participants regarding its usefulness in postgraduate medical training. Present study has been carried out with the objectives to study the format of JC of Surgery and Pathology postgraduate residents and to evaluate the role of JC as postgraduate teaching learning tool.

Method: A cross-sectional study regarding the role of JC as teaching learning activity was conducted amongst residents of Surgery (n=42) and Pathology (n=28) using a close ended questionnaire. According to the questionnaire filled by the students on various aspects like frequency and duration of meeting, discussion with the guide, selection and type of article, strength and importance of the JC etc results were tabulated. Descriptive statistics was used to summarize the responses.

Result: The response rate was 100% in both the departments. The frequency of the meeting was bimonthly (100%) and weekly (59.52%) in department of Pathology and Surgery respectively. Maximum response to the duration of JC was of 1-2 hours. Selection of JC articles was with consultation with guide (Pathology 96.43% and Surgery 80.95%). Majority of the articles presented were original research. Check list for article evaluation was available with 32.14% and 71.42% of Pathology and Surgery residents respectively. Most of them agreed it to be an important tool for research proposal.

Conclusion: The standard format of JC should be available for all the residents. Availability of the checklist for JC helps in critical evaluation of the given article; making JC an important and interesting mode of teaching learning tool for post graduate training programme.

Key words: Format of Journal Club, Journal Club, Teaching learning tool

Introduction:

Postgraduate teaching learning is carried out by different activities like seminars, journal club (JC), case presentations etc. JC is a group of individuals who meet regularly to critically discuss applicability of current articles found in medical journals.⁽¹⁾ It is a framed meeting to discuss the strengths, weaknesses and practical application of selected articles from the recent literature.^(2,3) The

earliest reference to a JC is in the biography of Sir James Paget, a British surgeon who describes a group of students at St. Bartholomew's Hospital in London during the period 1835 to 1854.⁽⁴⁾ JC triggers the development of critical appraisal skill and competency in evaluating scientific literature for evidence based solutions applicable to clinical queries. They bridge gap between research and practice of evidence based medicine.^(3,5) The time

of JC meeting, frequency, type of articles presented and availability of checklist for evaluation of articles are the factors that help residents in critically evaluating the articles. A resident should be able to differentiate between what is already known on a particular topic and what the given study adds.⁽⁶⁾ Residents who know the art of critical appraisal are well versed with methods and conclusions of published articles. They begin to view them with a critical eye and gain good knowledge on epidemiology and biostatistics.⁽⁷⁾ Choosing a recent topic and then applying the newly acquired knowledge in an actual work situation will help residents in delivering good quality care to patients. Presentation of scientifically sound article will help them in preparing as well as writing their dissertation. The traditional JC is the only possible and reliable tool to improve efficiency and timeless reviewing of the present over flooding literature.^(2,8) JC has been suggested as a teaching-learning method that promotes the understanding, attitudes, motivation and competencies essential for producing better research out-put or evidence based medical care.⁽⁹⁾ JC is the best platform for selecting, reading, defining, discussing, interpreting and applying the result of systematic literature reviews. Various studies have been carried out to study format of JC and its importance in post graduate teaching learning. Study carried out by Rajpal et al showed that 85% of the residents reported the presence of JC as their part of residency training program.⁽¹⁰⁾ However, they have mentioned the need of additional work on format of JC and supplemental educational tools. Present study has been carried out with the objective to study the format of JC of Surgery and

Pathology postgraduate students and to study the JC activity as postgraduate teaching learning tool.

Material and Methods

A cross-sectional study regarding the role of JC as teaching learning activity was conducted at a Medical College in Pune. Residents of department of Surgery and Pathology were included in the study. Permission for this study was obtained from the HOD department of Surgery and Pathology. There were 42 residents (First year -16, Second year-13 and third year -13) who participated from Surgery and 28 residents (First year -10, Second year -10 and third year-8) from Pathology respectively. Informed consent was taken from all participants. Participation was 100% voluntarily and confidentiality was maintained by making anonymous questionnaire. A questionnaire was generated from similar studies found in the literature.^(11,12,13) The close ended questionnaire was having different components like format of JC which had questions on frequency of JC, duration of JC, number of articles reviewed before presentation, type of article presented. The importance of JC as teaching learning tool was assessed by questions on availability of checklist for evaluation of the article and importance of JC for preparing research proposal.. Validation of questionnaire was carried out by doing pilot study and final draft was created. Descriptive statistics was used to compute all responses.

Results:

The study participants were 42 Surgery and 28 Pathology residents. The response rate was 100 %. Thirty nine male (92.85%) and three female (7.14%) residents of the department of Surgery participated in the survey and 15 males (53.57%) and 13 females(46.42%) from department of

Pathology. The duration of JC meeting lasted for 1-2 hours in most of the sessions in both the departments, in Surgery 39 (92.8%) reported that the JC lasted for 1-2 hours and only 3 (7%) reported it to last for >2 hrs. In Pathology all 28 (100%) reported that meeting lasted for 1- 2hrs. The meeting frequency was weekly in Surgery in most of the JCs 39 (59.52%) followed by monthly 8 (19.04%), biweekly (14.20%) and bimonthly (7.14%), whereas in Pathology it was conducted bimonthly 28 (100%). Regarding the selection of

article for JC presentation the residents mentioned that in both the departments, students and guide discuss about the article and decide on one to present, this was 27 (96.40%) and 34 (80.95%) in Pathology and Surgery respectively. Maximum numbers of articles were finalized by both guide and student in both the departments, however in Surgery few articles were selected only by the guide, which was not the case in Pathology. [Table 1]

	FREQUENCY OF MEETING	
	DEPT OF PATHOLOGY	DEPT OF SURGERY
Bimonthly	28 (100)	03 (7.14)
Biweekly	0	6 (14.2)
Monthly	0	8 (19.04)
Weekly	0	25 (59.52)
Bimonthly	28 (100)	03 (7.14)
	DURATION OF MEETING	
>2 hrs.	-	03 (7.14)
1-2 hrs	28 (100)	39 (92.8)
< 1 hr.	-	-
	DISCUSSION WITH GUIDE	
NO	-	02 (4.76)
YES	28 (100)	40 (95.24)
	NO. OF ARTICLES REVIEWED BEFORE PRESENTATION	
<3	8 (28.57)	4 (9.52)
3-5	3 (10.71)	26 (61.9)
>5	17 (60.7)	12 (28.57)
	SELECTION OF ARTICLE FOR PRESENTATION	
Both (student and guide)	27 (96.4)	34 (80.95)
Guide	-	06 (14.28)
Student	1 (3.57)	02 (4.76)
	TYPE OF ARTICLE	
Case Reports	9 (32.14)	5 (11.9)
Original Research	19 (67.85)	37 (88)
	ADVANCE INTIMATION	
Days	-	12 (28.57)
Weeks	18 (64.28)	24 (57.14)
Months	10 (35.71)	6 (14.28)

Table 1: Format of Journal club of Surgery and Pathology residents.

Comments on strength of article was different in both the departments, in Surgery almost all the residents 41 (97.60%) whereas in Pathology only 11 (39.20%) said that comments were given. Check list for evaluation of JC was available more to Surgery residents as compared to Pathology residents. When enquired about the Importance of JC for research proposal 92.80% of Pathology and 95.20% of surgery residents replied it was a useful activity for preparing research proposal. [Table 2]

	DEPT OF PATHOLOGY	DEPT OF SURGERY
COMMENT ON STRENGTH OF ARTICLE		
Given	11 (39.2)	41 (97.6)
N/G	17 (60.8)	1 (2.38)
CHECKLIST FOR ARTICLE EVALUATION AVAILABLE		
Given	09 (32.14)	30 (71.42)
N/G	19 (67.85)	12 (28.57)
IMPORTANCE FOR RESEARCH PROPOSAL		
Given	26 (92.8)	40 (95.2)
N/G	2 (7.14)	2 (4.8)
DESCRIBES NEW TECHNIQUE		
YES	28 (100)	33 (78.57)
NO	-	9 (21.42)

Table 2: The journal club activity as postgraduate teaching learning tool.

Note: N/G- Not Given

Discussion:

Postgraduate activities are meant to update the knowledge of residents and faculty and to provide insight to different topics. Postgraduate teaching learning takes place in different departments in various forms like lectures, case presentations, seminars, JC's, short talks etc. These activities help postgraduates to develop their presentation skills, problem solving and critical thinking skills. Research is an integral part of postgraduate training, which can be cultivated by preparing dissertation on a particular topic.

The knowledge and skills needed for critical appraisal of literature and practice of evidence based medicine (EBM) are often taught through courses and workshops in classrooms away from clinical practice. However, without reinforcement in subsequent practice, modest knowledge gained from such courses is likely to deteriorate

overtime.⁽¹⁴⁾ Latest updates should be taken from journal

articles and not from the text books which are usually couple of years old when published. JC also serves this purpose by involving trainees in the latest research articles. Many trainees even after acquiring their fellowship still do not know how to write a scientific paper.⁽¹⁵⁾ In present study it was found that JC activity is conducted in both these departments and this activity is weekly in Surgery and bimonthly in Pathology department. Most JC sessions duration was 1-2 hours. Most articles presented in JC are in consultation with the guide assigned for that particular session. It is a difficult task for residents to choose correct article for JC. A trained faculty should help the postgraduate to choose the correct article for presentation. Guide can be changed from session to session.⁽¹⁶⁾ Journal articles reviewed by residents before presentation were variable in both the departments, in Pathology most reviewed more

than 5 articles whereas in Surgery majority reviewed 3-5. Reviewing different articles before presentation help residents to critically analyze them at individual level before discussing with their guide. Ibrahim et al showed that most JCs meet weekly (59%) or monthly (38%) and most of the JCs lasted for 1-2 hours and only 4 (7%) lasted for more than 2 hours which was in concordance with our findings. Rajpal, Mobbs, and Moberg-Wolff EA also had similar observations.^(10,17,18) An imperfect study that is well described in its limitations, and well presented and discussed, can result in an excellent report. Conversely, a model experiment can be misunderstood because of poor presentation. A resident should be able to differentiate between the quality of research conducted and the quality of the research report.⁽⁶⁾ It has been said that journal articles are a time honored educational paradigm for teaching and development of critical appraisal skills.⁽¹⁸⁾ It was found that though JC activities are regular in both the departments, being in the same institution there were difference in their format and this may be due to one being para clinical and the other clinical subject. Each department has its unique method of conducting postgraduate teaching learning activity. Format of JC might differ but for successful JC there are some elements outlined. These are regular schedule, location, compulsory attendance, emphasis on limited number of articles reviewed in depth and formal teaching of critical appraisal skills.⁽¹¹⁾ Majority of the articles presented in both the departments were original articles. Similar results were found in study by Ibrahim et al , where 77% of the articles were original or review articles and 14% were case reports.⁽¹⁶⁾ Study carried out by Pitner N showed that 30%

preferred the selection of review articles, 23% primary research studies, and 43%, a mix of both types for discussion; interest in primary studies correlated positively with level of training.⁽²⁰⁾ It was found that presentation of original articles only is associated with longevity, but lower attendance rates.⁽²¹⁾

It was seen that advance intimation for JC activity was given, but few Surgery residents responded that the articles for JC are allotted few days prior to the presentation. One of the important characteristics of successful JCs are timely dissemination of reading material, preferably via the internet, and regularly scheduled meetings at predictable intervals and at a time appropriate for all participants.⁽²²⁾ Availability of checklist is very important. In present study, maximum number of Surgery residents had the availability of checklist for critical appraisal of the article. On the other hand, maximum Pathology residents were not aware of it. Moberg-Wolff EA found that most studies (76%) showed that there is lack of an organized method for critical review.⁽¹⁸⁾ A number of authors have advocated checklists or reading guides as tools for teaching critical appraisal skills.^(23,24) The checklist has many advantages as it helps in consistency of review, speed, and to find out methodological flaws. The implementation of the checklist was found to increase satisfaction and improve the perceived educational value without increasing the workload.⁽²⁵⁾ The study helped us to introduce the checklist for JCs in this department. Evaluating scientific quality of an article is notoriously difficult.⁽²⁶⁾ There are various guidelines, checklists and flow diagrams that are now part and parcel of modern medical journalism. These tools make the task of authors, reviewers,

and editors easy. Another valuable and highly recommended use of these materials is critical appraisal of published articles during JC. There are tools available like CONSORT (Consolidated Standards of Reporting Trials) STROBE (Strengthening the Reporting of Observational Studies) PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) and many more.⁽²⁶⁾ Most of the residents from both the departments said that JC has an important role in preparing research proposal. JC have long been recognized as an effective tool for teaching evidence-based medicine.⁽²⁾ Residents who are being taught appraisal skills reportedly pay more attention to a study's methodology and are more critical of its conclusions.⁽⁷⁾ The further scope of the study is to conduct it in a large group of different specialties of different institutions, which

will provide more detailed information about this activity and diversification in various organizations. Opinion of faculty members on this activity can be included. We can also extend this topic for qualitative study, where in-depth interviews and focused group discussion among residents and faculty members of different subjects can be discussed to improve JC activity.

Conclusion:

JC facilitates reviewing the literature, understanding the research methodology, use of statistics and also development of analytical skills. The standard format of JC should be available for all the residents. Availability of the checklist for JC helps in critical evaluation of the given article; making JC an important and interesting mode of teaching learning tool for postgraduate training program.

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