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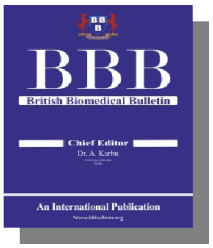

Original

Lack of Informed Consent and Absence of Ethical Committee Approval are the Major Ethical Issues for Clinical Studies in Thesis Researches for Postgraduate Students in Pharmacy College at Baghdad University

Ehab Mudher Mikhael[1]

Baghdad University – College of Pharmacy – Clinical Pharmacy Department

A R T I C L E I N F O

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Corresponding author: Baghdad University – College of Pharmacy – Clinical Pharmacy Department.
E-mail address:
ehab_pharma84@yahoo.com

A B S T R A C T

Objective: Evaluating some ethical issues in the researches of postgraduate students that submitted to Baghdad University – college of pharmacy – clinical pharmacy department.
Methods: All thesis researches of postgraduate students that involve clinical studies on human beings, that submitted within three years period (from 2011 till 2014) to Baghdad University, College of Pharmacy – Clinical Pharmacy department, were retrospectively reviewed by direct access to the library of Pharmacy college at Baghdad University. A set of questions were prepared in questionnaire format was used to evaluate ethical issues in postgraduate student researches through careful reading for the methodology of each one of these researches.
Results: This study showed that there is a significant absence (64.5%) of ethical committee approval for researches of postgraduate students that submitted to clinical pharmacy department in College of pharmacy/ Baghdad University. The ethical committee of Pharmacy College played a minor role for approval of clinical pharmacy department postgraduate students (12.9%). There is a significant absence (54.9%) of patient informed consent in the researches of postgraduate students. Additionally there is a non significant correlation between ethical committee approval for the research and the presence of patient informed consent. More than 77% of researches for postgraduate students in the form of randomized controlled clinical trial, at which the majority (61%) were open label trials. Furthermore, this study found that research funding and conflict of interest were not disclosed in any research for postgraduate students, besides the absence of any details about protection of patient privacy and confidentiality.
Conclusions: there are many ethical problems with the clinical researches of postgraduate students in Iraq. The role of ethical committee approval for researches is poor and without sufficient

follow up for these researches. Informed consent was absent in most researches. Additionally there is a non disclosure for any information regarding research conflict of interest, funding, or patient privacy and confidentiality protection.

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Introduction

Research means a systematic investigation, including research development, testing and evaluation, designed to develop or contribute to generalisable knowledge[1], while biomedical research is conducted for the purpose of systematically collecting and analyzing data from which generalisable conclusions may be drawn that may aid in improving the care of currently unknown beneficiaries in the future[2]. Medical research usually includes studies involving human subjects[3]. The chief role of human participants in medical research is to serve as sources of needed data. This is a different situation than ordinarily occurs in clinical medicine, at which diagnostic or therapeutic interventions are suggested or carried out solely to benefit the current patient[4], while in medical research individual subjects have suffered harm in the pursuit of acquiring knowledge that is purportedly intended to increase the public's welfare[3]. One important issue in this respect is that clinical investigators, especially those at the beginning of their scientific careers, often are confronted by dilemmas in reconciling their clinical duties with their research activities[5]. Research ethics is an essential part of good research practice to protect participants in clinical studies [6]. One of the most important guidelines for ethical conduct in clinical research is the declaration of Helsinki[7], which states that any medical research involving human subjects may only be conducted if the importance of the objective outweighs the risks and burdens to the research subjects. In many developing countries, there are doubts about ethics in clinical research[8, 9], so this study aimed to evaluate ethical issues in the researches of postgraduate students that submitted to Baghdad University – college of pharmacy – clinical pharmacy department.

Methods

Study design and data collection

All thesis researches of postgraduate students that involve clinical studies on human beings, that submitted within three years period (from 2011 till 2014) to Baghdad University, College of Pharmacy – Clinical Pharmacy department, were retrospectively reviewed by direct access to the library of Pharmacy college at Baghdad University. "Ethical problem" was defined as any explicit disagreement with the ethical principles and guidelines for the protection of human subjects involved in biomedical research, according to the declaration of Helsinki. A set of questions were prepared in questionnaire format as shown in table (1) was used to evaluate ethical issues in postgraduate student researches through careful reading for the methodology of each one of these researches.

Statistical analysis

Chi square test was used to assess significance of difference among categorical variables, where ANOVA test was used to assess the significance of difference for independent continuous variables. Pearson

correlation coefficient was used to test the significance of correlation for continuous variables. In this respect, for each thesis examined, any absence for ethical committee approval or informed consent was translated into zero value, whereas the presence of ethical committee approval or informed consent was considered equal to one. All statistical calculations were done by using appropriate internet based calculators. P values less than 0.05 was considered significant.

Results

After searching the library of Pharmacy college, it was found that only 31 thesis for postgraduate students (18 Diploma students, 8 Master students and 5 PhD students) were eligible to be included in this study, as shown in table 2.

This study (Table 3 and 4) showed that there is a significant absence (64.5%) of ethical committee approval for researches of postgraduate students that submitted to clinical pharmacy department in College of pharmacy/ Baghdad University. There is a significant absence (71%) for ethical committee approval in the researches of diploma students, while the absence of ethical committee approval for researches of MSc (50%) and PhD (40%) students didn't achieve statistical significance.

The results of this study (Table 4) showed that the ethical committee of Pharmacy College played a minor role for approval of clinical pharmacy department postgraduate students (12.9%), on the other hand ethical committee of Iraqi hospitals was more active in providing ethical approval for postgraduate students (19%).

This study showed (Table 5) that there is a significant absence (54.9%) of patient informed consent in the researches of postgraduate students, but this behavior is less evident in the researches of MSc and PhD students than diploma students. Additionally, the result of this study (Table 6), showed a non significant correlation between ethical committee approval for the research and the presence of patient informed consent.

This study (Table 7) showed that more than 77% of researches for postgraduate students in the form of randomized controlled clinical trial, at which the majority (61%) were open label trials, on the other hand randomized double blind studies were absent in the researches of post graduate students.

Furthermore, this study found that research funding and conflict of interest were not disclosed in any research for postgraduate students, besides the absence of any details about protection of patient privacy and confidentiality.

Discussion

According to declaration of Helsinki [7] for any research a prior review by Research Ethics Committee is necessary to ensure that clinical research conforms to the highest scientific and ethical standards [10]. The five roles that addressed by the ethical committee are: 1stly assessing the legitimacy and validity of the informed consent process, second, conducting a comprehensive risk/benefit analysis, third, assessing the validity of a research proposal, fourth, ensuring that researchers observe the social norms, values, customs, traditions and laws that prevail in the community or jurisdiction in which the research will be conducted and finally, monitoring the research project as it unfolds and providing an ongoing advisory and consultancy service to both new and experienced researchers[11].

This study showed that there is a significantly absent (64.5%) role for ethical committee approval for researches of postgraduate students, however the higher percent was in case in approving research of postgraduate students in Iraq, similarly ethical

committee approval was absent in around 43% of research in Cameroon [12], this means that the role of ethical committee is still negligible in developing countries. This absence of ethical committee approval was only significant in researches of diploma students, and non significant for both MSc and PhD students, which may be due to the small number of MSc and PhD students who graduated in Clinical pharmacy department – at Pharmacy College – Baghdad University. For diploma students, there is a marked increase in ethical committee approval from 2011 to 2013, similarly it was found that the proportion of studies that reporting ethics review was increased significantly over time [13].

The results of this study showed that a minor role (12.9%) ethical committee of Pharmacy College in approving the researches postgraduate students in clinical pharmacy department, on the other hand ethical committee of Iraqi hospitals was more active in providing ethical approval for postgraduate students (19%), this result may be rationale in that till recently (2012), the only available ethical committee for clinical and medical research approval was related to Iraqi Ministry of Health and their hospitals[14]. Although researches in developing countries highly focus on informed consent as the most important requirement for doing an ethical research[15]; but, this study showed a significant absence (54.5%) of informed consent for participated patients, similarly, it was found that informed consent was absent in 45% of researches that done in developing countries[16].

Despite the common sense that ethical committee approval result in conducting researches in ethically acceptable manner, but in contrast to that sense this study showed that ethical committee approval for research proposals is not significantly correlated with informed consent, this strange result, can be explained only in that the role of ethical committee in Iraq was only to approve the proposal without sufficient follow up the researcher in their research work, which may occur in contrast to the ethical role of such committee as stated in Declaration of Helsinki[7]. Furthermore this study showed that the informed consent was present in some researches while ethical committee approval was absent, in other words ethical approval was obtained in researches less commonly than the informed consent, this result is absolutely different from the picture of researches in developed countries[17] but similar to that found in researches of other developing countries like Sri lanka[18] and india[19]. Similarly, failure to get ethical approval (31%) and absence of patient informed consent (47%) were common even in the leading medical journals in the world[17], yet to a lower extent than that in the researches of postgraduate students in Iraq, who studied at Baghdad University – College of Pharmacy. Additionally, it is well known that Failure to mention ethical approval or consent was significantly more likely in randomized controlled studies rather than observational studies [17], and since the most common design for the research studies of postgraduate students was in a form of randomized controlled study, so it can be concluded that the higher percent of unethical absence of ethical committee approval and patient informed consent would be more reasonable.

This study showed that randomized controlled studies is the most common study design, similarly randomized controlled studies were common in researches of Frieburg University in Germany[20]. Blinded studies are the most ethical form of randomized controlled clinical trials [21], but this study showed that open label studies is the most common design for postgraduate students in Iraq, so this means most studies that submitted to clinical pharmacy

department – Pharmacy College at Baghdad University were not in the best ethical design. No conflict of interest was disclosed, similarly in other studies it was found that conflict of interest was the least disclosed information in researches[22], however, it is easy to imagine that conflict of interest is present in most of these studies, since personal benefit of the researcher (student) to complete the research as soon as possible by recruiting as large as possible number of patients is conflicted with the researcher duty to ensure the best care for the patient to improve his/her health, this assumption can be confirmed in that informed consent was absent in the majority of researches of postgraduate students, furthermore there is a well known conflict of interest between the loyalty of the researcher student to his/her supervisor and patients[23].

Declaration of Helsinki[7] focus on ensuring privacy and confidentiality of the research subjects, however it is unknown if the postgraduate students fulfill this criteria or not, since there is no any disclosure of such information in all of the studied thesis researches, this point is an additional ethical problem in the researches of clinical pharmacy postgraduate students in Iraq.

This study showed that there is no any disclosure about funding and sponsorship in all researches of postgraduate students, unfortunately, information on sources of funding is important to appraise the validity of a study's results. It has been shown that commercially funded studies are more likely to produce favorable results and conclusions than those sponsored by other sources[24]. Although this information was consistent for most published studies, it is of concern that, firstly, for several studies with commercial funding or non-commercial funding, this information was omitted in the publications and, secondly, that funding sources are not always disclosed to the ethical committee (provided that they are known at the time of submission)[20].

Because all of these over mentioned ethical problems regarding researches in Iraq, it is necessary to ensure conducting clinical researches in ethical way which may in turn result in improving research subjects protection. To reach these goals it is recommended that there is need to adhere to global standards and legislations; establish, strengthen and empower ethical committees; and following up researchers during their research period.

In conclusion, there are many ethical problems with the clinical researches of postgraduate students in Iraq. The role of ethical committee approval for researches is poor and without sufficient follow up for these researches.

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Table 1. Questionnaire for the ethical issues of postgraduate student thesis researches

Question	Yes	No	Comment
Is there an ethical committee approval			Situation of ethical committee
Does the patient signed the informed consent (after discussion with the patient about benefits and harms of the research)			Verbal or written consent
What is the type of study			
Is there any information about patient privacy and confidentiality protection?			
Is there any statement regarding presence or absence of conflict of interests?			
Is there any statement regarding presence or absence of funding?			

Table 2. Researches distribution according to the scientific degree of the student

Year	Postgraduate degree			Total
	Diploma	MSc	PHD	
2011	5	1	1	7
2012	8	3	1	12
2013	5	4	3	12
Total	18	8	5	31

Table 3. Percentage of ethical committee approval for researches of postgraduate students through 2011 – 2013

Year	Diploma		P value	MSc		P Value	PHD		P value
	Yes N (%)	No N (%)		Yes N (%)	No N (%)		Yes N (%)	No N (%)	
2011	0 (0%)	5 (100%)	0.025	1 (100%)	0 (0%)	0.317	1 (100%)	0 (0%)	0.317
2012	1 (12.5%)	7 (87.5%)	0.033	2 (67%)	1 (33%)	0.563	0 (0%)	1 (100%)	0.317
2013	3 (60%)	2 (40%)	0.654	1 (25%)	3 (75%)	0.317	1 (33.3%)	2 (66.7%)	0.563
Total	4 (28.5%)	14 (71.5%)	0.018	4 (50%)	4 (50%)	1	2 (40%)	3 (60%)	0.654

N= number of thesis researches

Table 4. Situation of the committee that provide the ethical approval for postgraduate student researches

Degree	Research was approved Ethically by ethical committee of			Research not approved by ethical committee N (%)	P Value
	College of pharmacy N (%)	Hospital N (%)	MOH N (%)		
Diploma	1 (5.5%)	3 (16.7%)	0 (0%)	14 (77.8%)	0.000
MSc.	1 (12.5%)	3 (37.5%)	0 (0%)	4 (50%)	0.171
PhD.	2 (40%)	0 (0%)	1 (20%)	2 (40%)	0.531
Total	4 (12.9%)	6 (19.3)	1 (3.2%)	20 (64.5%)	0.000

N = number of thesis researches

Table 5. Percentage of patients who signed the Informed consent in the researches of postgraduate students through 2011 – 2013

Postgraduate degree	Verbal informed consent N (%)	Written informed consent N (%)	No informed consent N (%)	P Value
Diploma	3 (16.7%)	4 (22.2%)	11(61.1%)	0.042
MSc.	4 (50%)	0 (0%)	4 (50%)	0.135
PhD	1 (20%)	2 (40%)	2 (40%)	0.818
Total	8 (25.8%)	6 (19.3)	17 (54.9%)	0.036

N= number of thesis researches

Table 6. Correlation between ethical committee approval and the informed consent

Researches with ethical committee approval	Researches with signed informed consent	Correlation coefficient (R)	P value
11	**14**	**0.16**	**NS**

Table 7. Type of study for postgraduate student thesis researches

Type of study		Postgraduate degree			Total N (%)	
		Diploma	MSc	PHD		
Randomized controlled studies	Randomized open label study	14	2	3	19* (61.29%)	24* (77.42%)
	Randomized single blind	0	5	0	5* (16.13%)	
Observational studies	Cross sectional	4	1	1	6 (19.35%)	7* (22.58%)
	Case control study	0	0	1	1 (3.23%)	
	Total	**18**	**8**	**5**	**31 (100%)**	

N= number of thesis researches; *Significant difference