Correspondence

Use of Aspirin in acute coronary syndrome in a Tertiary Care Hospital in Karachi

This refers to the above manuscript published in (April-June 2002) issue of Pakistan Journal of Medical Sciences. In the abstract, the study design has been referred as Randomized Prospective Study. This study is neither Randomized nor Prospective.

1. Randomization is a process, through which the study subjects are assigned to two or more groups. This is done by using random number tables, either manually or through computer. This process ensures that every subject has an equal and known chance of being included in any group. The present study is dealing with only one group, so there cannot be any randomization.

2. Prospective study is carried out to find out the cause-effect relationship between a suspected risk factor and a disease. The starting point in a Prospective study is a group of people having the suspected risk factor. We follow this group (cohort) over a long period of time without any intervention and observe the number of cases of the suspected disease occurring during the study period. The results are compared with a group of matched controls.

For example, if we want to find out a relationship between high cholesterol and myocardial infarction, we can screen a large population for cholesterol. The population will automatically get divided into two groups; one with normal cholesterol and the other with high cholesterol. We follow both groups over a long period of time and note the occurrence of MI in other group.

The correct name of such studies is COHORT studies. These are some times called "PROSPECIVE studies", because our direction of enquiry is from cause to disease. The cause comes first and disease appears in future.

On the other hand we can study the same relation in a different study design. We can start with a certain number of cases of MI coming to the hospital. We can estimate the blood cholesterol of all these patients and then take a equal or higher number of matched controls. The cholesterol of these controls will also be measured and then compared with that of cases. This is known as Case-Control Study or Retrospective Study because, we are looking at the past events of a patient's life. The cholesterol level of each MI patient reflects his past. Here the direction of enquiry is from disease to the cause. If a disease is present today, its cause could only the found in the past. That is why this type of studies is sometime called Retrospective Studies.

Unfortunately the terms "Prospective" and "Retrospective" are misnomer in Pakistan. Any study for which the author collects the data himself is labeled as "Prospective", and any study carried out on previously collected data is labeled as RETROSPECTIVE study. This is absolutely wrong.

The term "Prospective" or "Retrospective" has nothing to do with the type of data used. It is the direction of our enquiry. If we start with a risk factor and are looking for development of the disease, the study will be called COHORT or PROSPECTIVE. If our starting point is cases with a particular disease and we wish to find out the cause, then our direction of enquiry will be backwards, because the cause of present disease will be in the past. Therefore such studies are known as CASE-CONTROL studies or RETROSPECTIVE studies.

3. The number of the tables in this manuscript is very high. The data presented in Table I, II, III & IV can easily be combined in one table, a

style initiated by "Studies in Family Planning" and now adopted by many journals. Table VIII and IX can also be combined.

4. It is not clear, which were those 21 patients, who took Aspirin at home? Did they report directly to NICVD or did they report to a GP hospital.

5. There are some confusions in conclusions drawn from the study (Page 91: Discussion). The authors have drawn the conclusions that 5.5% were advised to take aspirin by the GP, 7.5% by the local hospital and 76.5% by NICVD. This comparison is not VALID. The actual position is as follows. The first consultation of 47 patients was with their GP and 11 of them (23.4%) were advised to take Aspirin. Out of 51 cases, who visited a local hospital fifteen patients (29.41%) were asked to take aspirin, whereas all 102, whose first consultation was at NICVD (100%) were asked to take aspirin.

Reference:

1. Jawaid M, Samad A, Ishaq M, Jawaid SA. Use of Aspirin in acute coronary syndrome in a tertiary care hospital in Karachi. Pak J Med Sci 2002; 18(2): 87-94.

DR. N. REHAN
Director Research
PMRC Research Centre,
Fatima Jinnah Medical College, Lahore.

Author's response: We are extremely grateful to the worthy reader for his valuable comments and suggestions. However, we would like to point out that the process of randomization not only involves the division of two or more groups but also in the selection process of patients properly. The prospective and retrospective studies also involve the time frame from which the studies have been undertaken. The observations by the learned scientist are correct for prospective interventional studies. However our's was a prospective observational study.

Although people having a lot of time and those who study journals for research purposes can analyze the data in jumbled up tables, for ordinary busy clinicians in Pakistan which is also true for most of the clinicians in developing Third World countries, multiple simple tables stressing one or two points are much more important. The example is like traveling in a First Class or the Third Class compartment. A very busy table is just like a Third Class compartment wherein one has to struggle to find sitting place while in the First Class compartment one can sit and relax. That is why we recommend that the tables should be simple and not very complicated because such tables produce a lot of confusion. Although a person mainly concerned with research may be able to analyze these complicated tables, for the average clinicians multiple tables with single objective are much more message carrying.

Table-VIII describes the place where Aspirin was first taken. It does not make any difference in those patients who took Aspirin at home whether later they consulted the GP or went to a healthcare facility. However of all those patients who did take Aspirin, only 5.5% took it when they visited the GP/Family Physician. As pointed out by the worthy reader, it is correct that of the 47 patients who first consulted the GP/Family physician, only 11 (23.4%) and 51 (29.41%) of those patients who visited a local hospital were advised to take Aspirin.

The fact remains that in majority of established Myocardial Infarction patients the family physicians do not prescribe Aspirin therapy in the early hours. Hence, more awareness programmes directed at GPs/Family Physicians are needed.

DR. MASOOD JAWAID MBBS
PROF. ABDUS SAMAD MD

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A prevalence study of congenital heart disease in NWFP, Pakistan

In the manuscript entitled "A Prevalence Study of Congenital Heart Disease in NWFP[1] there is discrepancy between title and objectives. The title says "A prevalence study of congenital heart disease in NWFP, Pakistan", which presumes that the authors have stud-

ied the number of cases of congenital heart diseases in the entire province of NWFP, whereas in fact they have only assessed the frequency of congenital heart disease in patients referred for echocardiography in a private cardiac diagnostic facility in Peshawar. The design of the study has been mentioned as echocardiography study. There is no study design known on echocardiography study.

Under the heading of Patients and Method, it has been described as prospective observational study. I have already given the details of the prospective and the retrospective studies in my comments on the manuscript entitled "Use of Aspirin in Acute Coronary Syndrome in a Tertiary Care Hospital in Karachi. This is a descriptive study.

Reference:

1. Ahmed R, Awan ZA, Bukhsi F. A prevalence study of congenital heart disease in NWFP, Pakistan. Pak J Med Sci 2002;18(2):95-98.

DR. N. REHAN
Director Research
PMRC Research Centre,
Fatima Jinnah Medical College, Lahore.

Author's response: I acknowledge the discrepancies in the terminology used as pointed out by the learned Director, PMRC. This was an observational or descriptive study. The prevalence of congenital heart disease was studied in patient population referred for echocardiography from all over NWFP. This is a well equipped referral centre with color Doppler echocardiographic facility covering the whole of NWFP as was evident from the patients addresses, which were particularly noted for this purpose.

I welcome these precious comments and look forward for continued guidance which will help us to improve the quality of our manuscripts.

DR. REHAN AHMAD
Department of Medicine,
Ayub Medical College, Abbottabad.

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Mental disorders in cancer patients: Observations at a Tertiary Care Centre in Pakistan[1]

In this manuscript in the same issue entitled Mental disorders in cancer patient the abstract does not show the total number of subjects, which leads to some difficulties in understanding the results. The statement made in the last two paragraphs on Page-111 is not correct. It has been said that mental disorders were more common in males (62%) than females (38%) and the difference was statistically significant. This statement is based on Table-2 (Page 112), which shows that out of 143 patients suffering from mental disorders 54 patients (37.8%) were females and 89 patients (62.2%) were male. This is a common mistake committed by most Statisticians in Pakistan.

If you go to the results section, you will note that 220 patients (155 males & 65 females) were included in the study. Out of 155 males, 89 had mental disorders, which comes to 57.4% whereas out of 65 females, 54 had mental disorders (83.1%) showing that females had a significantly higher ($P<0.001$) rate of mental disorders as compared to males. This is just opposite to the statement mentioned in the above paragraph.

Similarly the statement that mental disorders were more common in younger (< 25 years group) than the older group (> 45 years) cannot be accepted because it suffers from the same fallacy as mentioned above.

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Intra-Aortic baloon counterpulsation in the management of low cardiac output syndrome after coronary artery bypass surgery[2]

In this study two groups of patients were given two different managements and the effects of these managements on MAP, CI, PCWP, CNP, Urine output and ICU stay were studied.

In such studies, both groups need to be properly matched. In the present study, age, sex, angina status, NYHA status and extent of dis-

ease were compared in both groups and it has been shown that there was no statistically significant difference in these variable among both groups. For comparison, Chi-Square and Paired "t" test have been used (Table-I).

Paired "t" test is used when we obtain paired observations on the same individuals e.g. if you measure MAP of 50 individuals at 0 and 24 hours then paired "t" test can be applied to study any difference between the values obtained at 0 and 24 hours for these 50 individuals. However, if similar values have been obtained for another group of 50 individuals, then paired "t" test cannot be applied. We will have to apply "t" test for independent samples.

Table-I shows that based on paired "t" test, there is no difference in the mean age of both groups. As explained above paired "t" test cannot be applied on these data. When we use the appropriate test i.e. independent sample "t" test, then there appears to be a significant difference ($P<0.02$) between the ages of these two groups. If age has any bearing on the results, then this difference between the mean ages of these two groups will serve as a confounder and distort the results.

Table-II also suffers from the same fallacy. Paired "t" test can only be applied if one is comparing the 0,2,6,12,24,48 hour values of the same group. When values obtained at different time intervals are compared among both groups, then independent sample "t" test will be applicable. With the application of proper statistical test, significant values of MAP at 12 and 24 hours and PCWP values at 12 and 24 hours become non-significant. The difference in the mean duration of ICU stay among both groups (Page16) is not statistically significance.

References:

1. Iqbal A, Shah GM, Siddiqui KS. Mental disorders in cancer patients: Observations at a Tertiary Care Centre in Pakistan. Pak J Med Sci 2002;18(2):109-116.
2. Riaz MN, Ahmed I, Saleem K. Intra-Aortic baloon counterpulsation in the management of low cardiac output syndrome after coronary artery bypass surgery. Pak J Med Sci 2002;18(1): 11-17.

DR. N. REHAN
PMRC Research Centre,
Fatima Jinnah Medical College, Lahore.

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Benefits of early intervention in the progression of cardiovascular disease

This refers to the manuscript "Benefits of early intervention in the progression of cardiovascular disease"[1] published in July-September 2002 issue of Pakistan Journal of Medical Sciences. It makes an interesting reading. Undoubtedly it is an excellent write up. We are planning to present this paper in our next journal club.

Reference:

1. Jafary MH. Benefits of early intervention in the progression of cardiovascular disease. Pak J Med Sci 2002; 18(3): 239-249.

DR. H.A.M. NAZMUL AHASAN
Associate Professor of Medicine
Khulna Medical College,
Khulna, Bangladesh

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Workshop on Peer Review System

This refers to the proceedings of "Workshop on Peer Review System"[1] (also published in 'Pulse' International dated October 1-14, 2002) I want to mention the remarks made by Prof. Abdus Samad "People in basic sciences, it is said, are better reviewers. They are more interested in academics". Thanks to Prof. Samad for these compliments.

In my opinion basic medical scientists set the stage for clinicians to perform. In other words, basic medical scientists are the play-back singers of the stage of clinical practice. It is a fact that "rigorous application of the scientific method is often difficult in clinical situation. Cooperation between clinicians and experimental physiologists will be one way to redress the balance. Until now this has been less frequent than is desirable (Torrens & Morison 1987)."[2] So the need of the day is to create a congenial and cooperative atmosphere in which basic medical scientist and clinicians work together for the improvement and advancement of medical science and to the ultimate benefit of the patients.

Reference:

1. Jawiad SA. Proceedings of "Workshop on Peer Review System. 'Pulse' International October 1-14, 2002. p 1,6 & 8.
2. Torrens M, Morison JFB. Preface. In: The physiology of the Lower Urinary Tract. Springer-Verlag, London; 1987:p vi.

DR. TEHSEEN IQBAL
Assistant Professor of Physiology,
Nishtar Medical College,
Multan.

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Peer Review to improve quality of manuscripts: Are we ready for Open Peer Review?

Thank you very much for the copies of the Pakistan Journal of Medical Sciences (PJMS). As I have the honour of being on the Editorial Board, I feel very much proud to see the remarkable improvement of the successive issues of PJMS. It is undoubtedly one of the leading medical journals of this sub-continent. Your contribution in "Medical Writing" is enormous. The "Editorial" "Peer review to improve quality of manuscripts. Are we ready to open peer review?[1] is definitely a time honored topic and it made interesting reading. Besides traditional sections/topics, you are trying to improve the standard of the journal by adding new sections which is though difficult but most heartening.

Most of the healthcare professionals affiliated with the Editorial Board of Medical Journals of countries like ours are academicians/clinicians and remain very busy with teaching, private practice etc. Unfortunately, research activities, medical writing and scientific seminars are less in our countries. Even exchange of Medical Journals among neighboring countries is also very minimal. Facing all these difficulties, Pakistan Journal of Medical Sciences is playing a leading role in this field. I hope you will go on contributing. I pray to Almighty Allah to help and help your valuable efforts in the field of academics in general and in further improving the quality, standard of Pakistan Journal of Medical Sciences in particular.

Reference:

1. Jawaid SA & Jafary MH. Peer Review to improve quality of manuscripts: Are we ready for open Peer Review? Pak J Med Sci 2002; 18(3)173-180.

DR. HAM NAZMUL AHASAN
Associate Professor of Medicine
Khulna Medical College
Khulna, Bangladesh
E-mail:supto@bttb.net.bd

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I was pleased to see the recent issue of Pakistan Journal of Medical Sciences Vol. 18 No. 3 July-September 2002. In particular I liked your editorial titled "Peer review to improve quality of manuscript – are we ready for open peer review".[1]

Our is a teaching and research institution. Myself and several of my colleagues conduct research on different aspects of biomedical sciences and supervise M.Sc research thesis mostly in the fields of epidemiology, medical parasitalogy and entomology. By training I am an epidemiologist with Ph.D in biomedical sciences (biostatistics-epidemiology) from University of Hawai USA. We will appreciate to receive complimentary copies of Pakistan Journal of Medical Sciences for our departmental library. It will benefit a large number of students and faculty of our department.

Reference:

1. Jawaid SA, Jafary MH. Peer review to improve quality of manuscript – are we ready for open peer review. Pak J Med Sci 2002; 18(3):173-180.

PROF. DR. MUHAMMAD SULEMAN Ph.D
Chairman, Department of Zoology,
University of Peshawar,
Peshawar, Pakistan.
E-mail: upesh_zoology@yahoo.com

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