

Present Trend in Medical Research in Anatomy.

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ABSTRACT

Background: Effort has been made to assess the recent trend in Medical research especially related to Anatomy. Anatomy being foundation subject requires a fundamental approach to the study of its fabrics. It is therefore required that the Anatomists should work more on the basic principles of Human structure. Trends in Anatomy changes as per the availability of the infrastructure of the medical research. In India the facilities for the basic research is not upto the desired level, which could be reflected by the articles being published in National and International Journals and even by deliberation of their work in various forums. **Methods:** We have taken efforts to go in depth to find out the present trends in research in Anatomy by analyzing and taking help of the papers being presented in National Conference of Anatomy held recently in November 2015 at King George Medical University Lucknow. **Results:** It has been observed that there is a gradual decline of research related to the Animal Experimentation, which is required for in vivo screening of the embryopathic drugs which could be helpful for screening the mechanism of Teratogenicity. Availability of cadavers is also not upto the mark where people could do some research on Gross Anatomy and Osteology. **Conclusion:** Sporadic research may not be very helpful in contributing to the field of Anatomy. Institutes/Medical Colleges should be given due importance in view to have a good infrastructure for the attraction of research in Anatomy to unfold some of the gaps in the description of Anatomy. This will certainly supplement its clinical values in the treatment of patients.

Keywords: Research, trends, conference, abstract.

INTRODUCTION

Medical education is a continuous process where the people get themselves updated by the electronic learning or by taking part in the conferences as well as actively participating in the scientific deliberation. These days due to MCI ruling for the career advancement, faculty members do attend the conferences and present their papers. I understand that the MCI has instituted temptation for awarding the credit hours, which may be counted during career enhancement.^[1] Naturally, to meet out this requirement, faculty members put their efforts to unearth something which could be presentable during the National and International Conferences.^[2] Regarding the quality and quantity of the papers which are being presented in such conferences, there are a lot of things which need to be debated^[4].

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I take an opportunity to discuss the relevance of these papers in present scenario of teaching methodology and research. Due to extensive ethical sense and regulation, the animal experimentation for the basic research has been declined. Animal experimentation which stands as an important tool of methodology for evaluation of so many

problems has been denied considerably. I do not know how the people look into this matter when so many problems related to medical science are still unresolved without paying much of inclination of research.^[6]

MATERIALS AND METHODS

For this article we have taken the help of Souvenir of 63rd National Conference Of ASI held on 20th-23rd November 2015 at KGMU Lucknow. We have sorted out the nature of the papers and grouped them in different sections of Anatomical study. The authors of these papers were from different Medical Colleges in India. Oral presentations were made in the presence of Chairpersons; nearly 338 oral papers were also presented during the conference.

Some of the papers were presented in the form of Posters, which were documented during the Conference and were reviewed by the Anatomists. The Total numbers of Posters were 188.

We have also grouped them in different sections for analysis.

RESULTS & DISCUSSION

We have categorized the papers in a different category as depicted in [Table 1 & 2].

On observation, it has been revealed that 20.71% papers in the Oral presentation category were presented in Gross Anatomy sections.

Next to Gross Anatomy (18.63%) papers were related to Osteology followed by Imaging (12.42%).

The lowest percentage of paper were (0.59%) related to Embalming procedures. The papers related to Histology accounts for 8.87%.

It has been observed that only 1.47% papers were related to Neuroanatomy section. Genetics section contributed to 3.25%.

It is perhaps very surprising to see that Anatomists interest has been seen more engaged in formulating the paper related to Medical Education that has reached to 9.76%.

Animal experimentation papers were only 10.05%. While going through the Poster presentation we have noticed that 36.70% papers were related to Gross Anatomy and next in the series were papers related to Embryology 22.87% as depicted in table 2. Poster presentation showed 4.78% papers on Genetics and 2.12% papers related to Imaging/Radiology section.

It is surprisingly seen that almost negligible work being carried out pertaining to Immunohistochemistry which is now a fast emerging field of attraction of basic research at the molecular level for example use of Horse Radish Peroxidase (HRP) etc.

This could be made possible due to lack of funds; the area related to Genetics requires sophisticated instruments and well-equipped Laboratories, which might not have been available at various medical colleges.

If we go through the publications of ASI before 1975 one could notice more research papers were related to the Toxicology, Teratology where Animal Experimentation was needed to be carried out. The decline of this area could be due to prohibition of Animal Experimentation on account of ethical background which has frightened the people not to indulge in Animal Experimentation for legal implications.

These days due to extreme administrative constraint, Animal Experimentation Laboratories are also not established and funds are not made available to run the laboratory for longer span of time.

It is desired that for the basic study of Embryological/Teratological research a good Animal house is needed where the breeding of Experimental Animals are being continued. Such facilities could enhance the basic study of Developmental Biology.

Due to lack of supply of cadavers to the dissection hall direct cadaveric research has been considerably reduced due to the reduction in supply of cadavers, which does not fulfill the criteria for dissection even for the medical students. Number of medical colleges has gone up as compared to the availability of cadavers. Some efforts in the recent past had been made to encourage the donation of dead bodies, but it appears to be more show off. However, the supply of cadaver may not increase unless the Government does something for a legitimate supply of the

cadaver. The whole issue has lessened the interest of people conducting direct research on human cadavers especially for Gross Anatomy because the quantity of the cadaver is more needed for statistical analysis. Attraction for the animal experimentation has not gone beyond 10.05% this also indicates that animal experimentation has been also under the problem due to ethical issues and further due to lack of sophisticated standardized animal house. The institution should take initiative in this regard and researchers must be exposed for animal experimentation especially when one tries to screen the teratological effect of some toxic material and to see its effect on mechanism of Teratogenicity. Animal experimentation could be only a solution to reach at viable conclusion. I do not know why animal experimentation has been suppressed by showing the Red flag of ethical issues.

In view of this, it has been seen that some of the papers were presented taking help of fetal tissues that has reached nearly 4.14% in Oral presentation and 2.12% in poster presentation. Fetal tissue is also very important for the survey and monitoring the birth defect (Sinha 1992)^[5]. He stated that embryonic wastage will be also important for assessing the genetic cause of aborted fetuses. Fetal tissue is also difficult to obtain due to lack of coordination between Anatomy and Obstetrics and Gynecology department. Most of the time correct clinical history is not made available to substantiate and utilize the detailed information of the fetus for the purpose of various explanations pertaining to the histological and morphological study. If the fetal tissues are available in sequence and facilities are made available, embryological investigations can be enhanced to fulfill the gap in the available literature for the developmental sequencing/staging of the embryos and fetuses. This could be more relevant in teratological research.

These days' people are utilizing modern technological tools like PowerPoint during the teaching of Medical students. Usually such lectures used to get finished within 30 minutes because PowerPoint material is often cooked and limited for time bound activity. Teachers use to read the projection part and this amounts to lowering the efforts of the teachers. In view of this existing situation, it is difficult to get feedback from students and also it will not be scientific to incorporate such relevance for making a paper related to medical education. Most of the time it appears to be that papers are made after copying the headings of others and it is being read without having a soul of this paper. A paper related to Medical Education could only be substantive provided the matter has been persuaded since long and the authors must have an affinity and interest in teaching to the Medical students both undergraduates and postgraduates. It should not be

related to the interest of attending the conference for obtaining the Credit Hours.

The research activity requires persuasion and devotion and it should be linked with the advancement of research, which could be also utilized for individual updating the knowledge as well as to be shared by others. Presentation of papers in the Conference clearly reflects the desire of the people in present scenario of the economic constraints required for the career advancement during the promotions and academic achievement. Research should be taken as a mission therefore it should be linked with enthusiasm for unearthing which has not yet come out and even persist in the form of gap in the scientific literature. These days case reports have been given more importance, which reflects the vertical orders of the research activities^[3]. Often the people utilize these papers in preparing the articles for publication in National and International journals.

Table 1: Oral Presentation

Category	Percentage Of Papers
Gross	20.71%
Oesteology	18.63%
Imaging	12.42%
Animal experimentation	10.05%
Medical education	9.76%
Histology	8.87%
Anthropology	6.50%
Foetal study	4.14%
Applied anatomy	3.55%
Genetics	3.25%
Neuroanatomy	1.47%
Embalming	0.59%

Table 2: Poster Presentation

Category	Percentage of posters
Gross	36.70%
Embryology	22.87%
Oesteology	15.95%
Applied anatomy	5.85%
Genetics	4.78%
Medical education	3.19%
Neuroanatomy	2.12%
Anthropology	2.12%
Foetal study	2.12%
Radiology	2.12%
Animal experimentation	1.59%
Embalming	0.53%

CONCLUSION

Fruitful exercise has been done towards exploring the trend of the paper presentation by the Anatomists to know the present trend of research activity in view of the various multifaceted problems existing in the medical education system. It is much apathetic to express that utilization of Animal experimentation is gradually declining due to ethical prohibition. Lack of cadaveric research

that too has gone much towards lower side due to the poor supply of the cadavers. Papers related to electron microscopic studies, histo-chemistry are very limited as compared to the publication in British and American Journal of Anatomy where most of the papers suitably processed by the utility of electron microscopic and other modern technology of research methodology. The ultimate aim of Anatomy research is to supplement its importance in clinical practice and research^[7]

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