

## Is visiting pathology museums a better way of learning than reading books and Internet: A study on response of second year medical students regarding the source of obtaining of gross specimens

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### Abstract

**Background:** Pathology museums are collective memory and visual bank of organs with various diseases. With advancement in the Google world, the importance of learning from museums, books & teachers is gradually being lost among medical students.

**Aim:** Aim of the study was to find out whether second year medical students know that pathology museum is a source of knowledge for gross specimens of various diseases; especially carcinoma cervix, as in present study, apart from books, internet etc.

**Methodology:** This was a cross-sectional study which was Interview based. A single random question about how to collect gross images of carcinoma cervix excluding text books & internet, was the question. The study was conducted in Department of pathology. Second year medical students who consented for the study participated. The data regarding the response given for the question was tabulated.

**Results:** A total of 144 medical students participated in the study. Of them 89 (61.8%) gave an opinion of collecting information on gross specimens of carcinoma cervix from the OBG department. Only 5 (3.4%) students were aware and gave an opinion of pathology museums as the source of obtaining pictures of gross specimen of carcinoma cervix.

**Conclusion:** Museums are collective memory and visual bank of human achievement and hard work of pathologists, clinicians and technicians visualized through a precious collection of past and present specimens, charts and models at one place. Textbooks, photos and Internet are all very well updated, but they cannot emphasize and replace the immediacy of real specimens.

**Key words:** Pathology Museum, Internet, Books

### Introduction:

*The road to medical knowledge is through the pathology museum & not through an apothecary's shop.*  
-William Withey Gull

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Pathology museums are collective memory and visual bank of organs with various diseases. It is the hard work of pathologists, teachers, clinicians, postgraduates and technicians visualized through precious collection of specimens & organs of past, present, charts & models at one place. It stimulates curiosity for learning, the gratification of which increases knowledge.<sup>1</sup>

Pathology Museum has an essential function to provide ample information of various diseases at

both undergraduate & post graduate levels.<sup>2</sup> It is one complete visual book of learning & retaining variable gross morphological changes occurring in different organs and tissues.

The minimum standard requirements as per Medical Council of India regulation (MCI), the specifications needed in the museum is an area of 90 square meter with presence of specimens, charts, models and microscopes. The facilities of museum include individual ways for self study, small group teaching and a seminar room for larger workshops.<sup>1</sup>

In today's technological & Google world, information is available at our fingertips. However the information is available digitally. Because of the advancement in the Google world, the importance of learning from museums, books & teachers is gradually being lost. Studies have shown that human mind grasps information considerably well from papered information rather than from digital media. Brain can take an enormous amount of information at once & has an amazing ability to narrow down the things it needs, conversely internet leads to a specific end point. Learning through internet kills the most meaningful relationship known to mankind i.e. the one between students & teachers.

A well maintained pathology museum is one of the source of information on rare diseases.<sup>3</sup> It is not merely used as a place for conservation and preservation as storage but it is a mission to create and spread awareness among the learners, teachers and also the public.<sup>4</sup> Most of the museums have catalogues of specimens detailing gross findings and the corresponding microscopic pictures. Students learn a lot through seeing gross specimens rather spending time on internet. Therefore, regular visits to a pathology museum are considered an essential component of learning & teaching pathology to medical students.<sup>5</sup> Museum helps tremendously to various medical researchers, educators / teachers and students in the process of teaching-learning purposes. It should be well organized, attractive and updated periodically to reach the excellence of

quality. It is the Hero of Department of pathology.<sup>4</sup>

Learning through museum forms the basis of teaching various clinical disciplines such as Medicine, Surgery, Gynaecology and Paediatrics.<sup>6</sup>

<sup>7</sup> There is need to introduce special innovative ways and modify museum learning to teach our blooming buds.

The present study was undertaken to assess the medical students knowledge about pathology museums as a thesaurus & a source of preserved pathological organs for learning.

### **Aim**

Aim of the study was to find out whether second year medical students know that pathology museums is a source of gross specimens of various diseases, especially carcinoma cervix, as in present study, apart from books, internet etc.

### **Methodology**

This was a cross-sectional study which was Interview based wherein a direct, open ended question was asked to the student by volunteer recruited for the study. Ethical clearance for the study was obtained from Institutional ethical review board.

The study was conducted in Department of pathology. Verbal consent was taken & students who consented answered the question. Second year medical students who consented for the study participated in answering the question. The class had strength of 148 students, 144 students (97.2%) participated. A single question was asked after explaining the purpose of study, through an interview based method. Students identity was anonymous and participation was voluntary. A single question about how to collect gross images of carcinoma cervix excluding text books & internet was the question. Three students volunteer were in voted to ask question and personally interviewed each student to get the answer for the question. The data regarding the response given for the question was tabulated.

## Results

A total of 144 Medical students who consented participated in the study. Response of the students

regarding collection of gross carcinoma cervix excluding text books & internet varied and is shown in the table.

### Response of the students regarding the source of obtaining of gross specimen of carcinoma cervix excluding textbook & internet

Response of the students	Total no of students (144)	Percentage
Getting pictures from professors, post graduate students of OBG department.	89	61.8%
From records of government & private Hospitals in the city.	28	19.4%
From the Operation Theatre	08	5.5%
From patients attending health Camps	07	4.8%
From patients attending Primary Health Centre	05	3.4%
Patients attending OPD of Gynaecology & oncology department	06	4.1%
From Cervical Screening programmes for females of specific age group	04	2.7%
Different Medical colleges	04	2.7%
Pathology Laboratory	06	4.1%
Pathology Museums	05	3.4%
Professors & Post graduate students of pathology department	03	2%
Forensic department	01	0.6%
Colposcopy	01	0.6%
No opinion/Do not know	04	2.7%

89 (61.8%) gave an opinion of collecting information on gross specimens of carcinoma cervix from the OBG department. Out of them many had an opinion to ask professors and post graduate students of the department for the case records & to collect photographs of cases of carcinoma cervix. 28 (19.4%) thought to collect case-records of carcinoma cervix from different private and government hospitals in the Davangere city.

Only 5 (3.4%) students were aware of pathology museums as the source of obtaining pictures of gross specimen of carcinoma cervix.

## Discussion

Pathology learning through various gross specimens in museum helps to understand the basis of disease process, so that the medical students understand the clinical manifestations and hence, treatment of the condition.

The medical museum as a teaching resource is as important to a medical school as its library. Although medical libraries remain a vital educational institution, most medical museums are losing its importance among the medical students. Reasons for why, when, and how this change occurred relate to changes in the educational role of gross pathology and anatomy as well as development of the technological world.

The purpose behind the study was to analyse, whether second year medical students know that pathology museums is a source of gross specimens of various diseases, especially carcinoma cervix, as in present study, apart from books, internet etc.

Majority of the students gave a response of collecting information on gross specimens of carcinoma cervix from the OBG department. Of them many had an opinion to ask professors and post graduate students of the department for the case records & to collect photographs of cases of carcinoma cervix.

There were very few students who gave a correct response of collecting information on gross specimens of carcinoma cervix from pathology museums excluding text books & internet. This shows that the Medical students rather than developing interest in museum, they are losing the meaning & importance of the museum. Existing medical school museums should never lose their value as scientific and pedagogic tools as long as pathology remain essential foundation for clinical practice. With the advancement of internet, pathology museums for gross specimens are gradually declining.

In a survey done by Chatelain et al 93% of students felt that pathology had a major role in Modern medicine and students learnt pathology through different teaching methods but they reported that there is need to emphasize the importance of pathology museums.<sup>8</sup>

Therefore suitable and appropriate arrangements should be made in order to stimulate

students and to invoke interest in them for museums in a manner which includes entry, attachment, learning and success results in the examination with everlasting imprints in the mind which helps to improve clinical knowledge. In recent years, pathology teaching and learning in medical schools has turned full circle and has gradually entered from traditional world to modernized digital world. Result being that in various medical schools traditional methods of teaching and learning has been overtaken by modern techniques such as virtual museums, digital images and power point presentations. There is a danger of Extinction of pathology museums which raises many questions in our mind as to: Who will teach medical students museum pathology in future? Is modern digital technology more important than traditional museum? Whatever may be the result, we as teachers have an important role to emphasize on traditional methods of teaching in addition to modern methods. Traditional methods definitely bonds the relation between teacher and student through interactions and discussions whether in museums or in class. So in this world of technologies, teachers have a duty to teach students with synergistic approach of combination of traditional methods combined with modern methods.

Importance of pathology museum is mainly educational and museum is not merely for collection of important, unusual or rare specimen. It is a place of learning for all. No student leaves its door, without learning something from his visit. Pathology museum is a visual book of morphological changes in various organs which reveal the signs of various diseases. It is not enough for pathology department to build and store specimen in museum, and to let students find out its value for themselves. Regular teaching and learning, with teacher interaction has to happen, so that museums become an active learning place and not just visual memory bank. Therefore, it is concluded that the students did not know about

pathology museum as a real source of gross specimen of carcinoma cervix.

## Conclusion:

Museums are collective memory and visual bank of human achievement and hard work of pathologists, clinicians and technicians visualized through a precious collection of past and present specimens, charts and models at one place. Teaching through pathology museums is a task which comprises of triad features like enthusiasm, time and patience; which if done properly, is greatly rewarding.

It's all very well reading books, but have we ever considered that Medical students will never get a sense of shape, size and feel. In a museum it is up to the students how they interpret the gross specimens. Some students might think that all the information we gain from museums are in books and internet, but where do the pictures and information given in them come from; The museum. If a book tries to fit in all the information that is available in the museum, it would be miles long. There is plenty of information in books, web-pages and sites, but what do you think has the most precise, interesting and different information? You can get the sense of size, smell, touch and shape in a museum that you cannot gain, when you are reading a book or internet. A book or webpage can show a picture or a caption, but it wouldn't have the same feel as spending time with specimens in museum.

Therefore, we conclude that the gross specimens in pathology museums are the hub of knowledge and lay the foundation for understanding the basis of disease which helps the Medical students to scratch their minds and to think about the disease in all the three dimensions. Textbooks, photos and Internet are all very well updated, but they cannot emphasize and replace the immediacy of real specimens. There is

nothing better than in being able to actually see the disease, and to think in all the three dimensions how it work. A quote to give the gist regarding pathology museum to our blooming buds of the future is that *seeing is believing!!*

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