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RADIATION ONCOLOGY EDUCATION AMONG INDIAN MEDICAL STUDENTS

Dr. Rathikota Yuvaraj MBBS Konaseema Institute Of Medical Sciences And Research Foundation, Amalapuram.

KEYWORDS :

INTRODUCTION

- Cancer is the second leading cause of death worldwide (1). It has now become more rampant and wide spread than it used to be.
- Medical oncology, Surgical oncology and Radiation oncology are the three cornerstones for cancer management today.
- Though 50% of cancer patients worldwide receive Radiation treatment with 40% cure rates(2), radiation oncology is yet to pave it's path to many medical students.
- There is a clear lack of oncological education in undergraduates (3). especially in the Indian setting due to a lot of factors.
- Radiation oncology is often looked down upon as a career option among indian undergraduates when compared to parallel branches like medical and surgical oncology Specialities.
- A survey in the US medical schools showed significant misconceptions regarding radoiation oncology(4).
- Many medical students were detterd from choosing radiation oncology as a career choice due to lack of knowledge about the speciality (5).
- With this background, the current study was conducted to assess the perceptions about radiation oncology among upcoming doctors.

Aims And Objectives

- To asses the knowledge and awareness among indian medical students regarding radiotherapy, it's role in treating cancers and the side effects of it.
- To indicate the need of undergraduate education on radiotherapy in the Indian scenario.

Methodology

- **Study Design** - this is a hospital based cross sectional study.
- **Study Participants-** indian medical students of all years and interns.
- **Study Setting-** konaseema institute of medical sciences and research foundation, amalapuram.
- **Study Size-** 102 medical students and interns.
- **Sampling Technique-** Conveniance sampling.
- **Inclusion Criteria-** medical students and interns of konaseema institute of medical sciences and research foundation.
- **Exclusion Criteria-** Students who are not willing to give consent.

Data Collection Procedure-

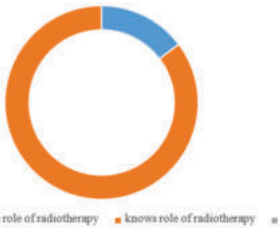
Data was collected through a online pre designed questionnaire.

Confidentiality - particulars and details of all participants was kept confidential throughout tbe study only summary of the details was used for declaring the result.

- **Ethical Consideration-** Institutional ethics committee approval was taken and informed consent was obtained.

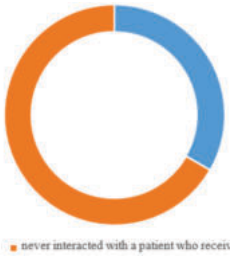
RESULTS

- A total of 102 medical students completed the online questionnaire of which 81.4% were interns, 14.7% were first years and 3.9% were 3rd year students.

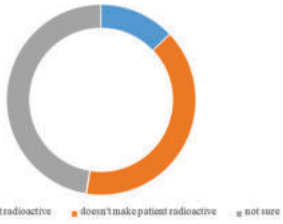


- 1) 14.7% of students revealed they don't know the role of radiation in cancer management.

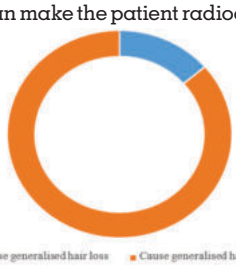
- 2) 65.3% students think that radiotherapy can be painful.



- 3) 66.7% students revealed they never interacted with a patient who who recieved radiotherapy.



- 4) 47.5% students revealed they are not sure if radiotherapy can make the patient radioactive.

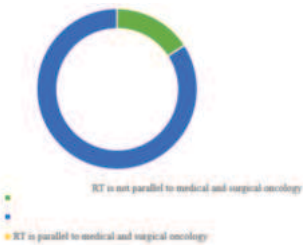


- 5) 86.3% believe radiotherapy cause generalised hair loss.

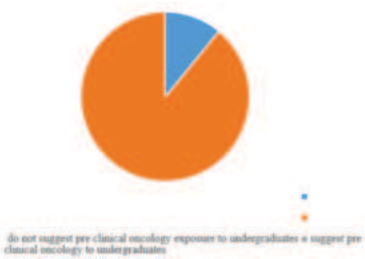
- 6) 76.2% students believe radiotherapy causes excess damage to surrounding normal tissue.

- 7) 89.1% students revealed they were never posted in the oncology ward.

- 8) 63% students revealed they never received a lecture on radiation oncology.



- 9) 15.8% students believe radiation oncology is not parallel to medical and surgical oncology specializations.



- 10) 89.1% students suggest pre clinical oncology exposure to undergraduates.

DISCUSSION

- Though radiotherapy is painless 65.3% undergraduates think that it can be painful and 14.7% don't know the role of radiation in cancer management.
- Radiation treatment only causes hair loss on the targeted site but 86.3% believe otherwise.
- 89.1% were never posted in the oncology ward and 63% didn't receive any lecture on this topic.
- This indicates the clear lack of emphasis on the subject in the undergraduate curriculum.
- 66.7% students revealed they never interacted with a patient who received radiotherapy which shows the lack of availability of resources and institutions that offer radiotherapy to general public.
- Nearly 90% of students suggest exposure of the subject in undergraduation. This suggests increasing interest around oncology and calls for initiation of rotationship in oncology.
- It is revealed that Medical students are not as comfortable with oncology when compared to other disciplines (6) leading to fewer students opting oncology as a career.
- In countries like india where the weight of various cancers are Significant, fewer oncologists could mean a decline in the nations overall health.
- Studies have proven that there is very little or no involvement of a radiation oncologist in the undergraduate curriculum (7).
- 60.8% of medical students had no exposure to radiation oncology (8).
- To improve Radiation oncology didactic education, oncology education as a whole should be improved (9).
- For better understanding and effective utilization of radiation in treating cancers, more centers should be equipped with expensive machinery that deliver radiation like linear accelerators, rapid arcs etc, which may prove to be financially hefty in developing countries like india. Therefore narrowing the opportunities for students to learn about radiotherapy.
- RO career advising was found to have an association with availability of RO electives(10), which many indian medical colleges fail to offer.
- To improve oncology exposure to indian undergraduates can be achieved through preclinical oncology interest groups (11) or through tumour board shadowing experience (12).
- Many institutions worldwide suggest to include radiation oncology in undergraduate curriculum (13) which enhances the understanding of the subject and helps medical students to choose oncology as a career.

CONCLUSION

- Radiotherapy is an effective, less invasive and a targeted method of treatment of cancers especially those which are difficult to reach through surgical routes.
- With better and more precise technologies, the damage to surrounding tissues is significantly Reduced.
- There is clear lack of centers providing radiotherapy to patients and a deficit in overall knowledge about radiation oncology among undergraduates.
- A pre clinical exposure rotation to all undergraduates in oncology is suggested to improve their understanding on the subject.

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