

Integration of Chemotherapy with Brachytherapy in the Treatment of Locally Advanced Uterine Cervical Cancer

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Abstract

Carcinoma of Uterine cervix is the second most common cancer affecting females in India. Concurrent chemoradiation has remained the sole definitive treatment available in the locally advanced stages. Our study was planned to take the advantage of radiosensitisation accruing due to chemotherapy at the time of brachytherapy when approximately forty percent of total tumour dose is applied. Study design was prospective, randomized and comparative. 100 patients with locally advanced squamous cell carcinoma of cervix (FIGO stage IIB to IVA) were included from 2017 to 2019 and divided into two arms of 50 patients each as per computer generated random number list

Keywords: Cervical cancer • Concurrent chemo-brachytherapy • Cisplatin • high dose rate intracavitary brachytherapy.

Introduction

Carcinoma of uterine cervix is the second most common cancer of females in India as per reports from National Cancer Registry Programme 2020. According to GLOBOCON 2020 statistics, the estimated number of new cases of cervix cancer is 6, 04,127 (6.5%) worldwide and 1, 23,907(18.3%) of all cancers in females in India [1].

Standard treatment regimen for locally advanced inoperable cervical cancer has remained external beam radiation with concurrent chemotherapy followed by brachytherapy [2]. However, the persistent/recurrent pelvic disease remains a significant obstacle in curative intent and prolonged survival. According to recent published literature, approximately half of locally advanced disease of cervix fails in treated pelvic area [3].

Materials and Methods

Patients consisted of those with locally advanced carcinoma of cervix receiving definitive chemo radiotherapy and brachytherapy in our institute from 2017 to 2019. A total of 100 patients who were willing to give informed consent and fulfilling the specified inclusion and exclusion criteria were enrolled for the study. jointly proposed an international consensus classification for GCT in 1997, which is unique, as for the first time a serum tumour marker category (S) based on post-orchietomy AFP, HCG, and LDH levels was used to supplement the prognostic stages as defined by the anatomic extent of disease [5].

Informal and formal assessments

- Continual education programs (internal and external)
- Understanding professional and ethical guidelines

Von hippel-lindau disease, vhl gene, and genetics of clear cell rcc

Since New Horizons has no formal professional development module for employees, it is difficult to evaluate how employees are progressing toward specific goals, such as proper usage of social media as a communication tool for reaching clients concerning the education and treatment of autistic children.

address clinical problems and increase employee retention. The purpose program was to have active staff nurses establish, direct, and reflect on for developing leadership, increasing knowledge, facilitate learning to help new nurses and to reflect on their practice. Seguin implied that the professional development plan helped their organization reduce time to obtain electrocardiograms for patients, decrease the likelihood of triage bottlenecks, which delay critical treatments, increased nursing staff empowerment, and retention. A well-organized professional development plan can serve New Horizons in the same capacity for management, education, administration, communication, and agency guidelines [1].

Lovering suggested social media could be a powerful tool for business. However, establishing a professional plan for employees is necessary to avoid the negative effects of social media. Lovering implied that two of the most considerable problems with improper uses of social media are tracking negative or misleading statements and accidental dispensation of confidential information. Tracking negative or misleading statements can be an enormous problem for companies, with social media it can be an added burden. However, training employees on policies and procedures associated with social media can help to prevent this problem.

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Yigit and Bagceci evaluated the contributions of action research to teachers' professional development. The professional development was essential for organizational goals and policies. The study consisted of six educators that appraised the usage of action research in professional development. Establishing an effective PDP is a significant factor to ensure the efficiency of improvements at any level. Yigit and Bagceci suggested that a development plan can help professionals assist clients to improve their skills, realize their potential, and acquire knowledge. It is essential that employees have the confidence, skills, and awareness to reach professional goals. A productive PDP can help to affirm this process at New Horizons. The researchers suggested that the teachers in their study conveyed that action research had a productive impact on their professional development in the following ways:

- Knowledge of field
- Discipline
- Positive impact on learners
- Methodologies
- Conscious of actions
- Job description

Yigit and Bagceci suggested that action research is a cycle of inquiry. This cycle of action can be used to identify problems or weaknesses. The action research approach coordinates well with a PDP. The chart below compares the steps involved in both general action research and professional development action steps: With New Horizons' concerns about the uses of social media, it is essential that an action research study be utilized to collect data on how a PDP and assessment process will serve the agency's needs with this matter.

Castro-Garcés and Martínez-Granada suggested that action research focuses on driving change in a context study. The collection of data in an action research approach begins with a question that leads to an investigation and establishing techniques for collecting data. Once the data is collected, it must be interpreted to develop and implement an action plan to address the problem. The researchers implied it would be essential to appraise the current plan to assess new problems. Then the most important part of the process, reflection [3,4].

The reflection process should involve the following questions:

- What does the data tell us?
- What changes could be instituted?

The action research approach is a cyclical process to ensure an ongoing enrichment mechanism to engage problems and information to enact change. Using an action research design for collecting data is an appropriate methodology process to pilot this study because it will allow the staff at New Horizons to be co-researchers and focus on realizing practical solutions to

developmental and communication issues within the agency. Green and Huntington used an action research approach to collect data in the public healthcare environment to determine a best practice approach in providing safe and effective interventions for clients. The participants in the action research model worked in small professional development communities to classify potential professional development subject matter (social media) and the development of an online learning lesson program for employees. After the staff had taken the online learning activities, the activity would be evaluated to identify areas of learning needs. The key feature of this cyclical process is that information that is obtained from the online assessments could be used to create other learning activities. The feedback that is communicated to the staff will allow them to reflect on their knowledge and opportunities for improvement [5].

Solution-based on data collection

The proposal to use an effective action research learning process can be very valuable to New Horizons. Huh, Lee suggested that action learning distinguishes itself from other learning methods in that necessitate learners to take actions centered on project outcomes. During implementing a solution based on data collection, and reflecting on the ramifications of their actions, the learners are given more opportunities for improvement through learning activities. This solution-based approach has many benefits it encompasses a multifaceted process and a higher level of participation from staff members [6].

The goal in the solution process is to enable staff to be able to collaborate with researchers, establish agendas, build solutions to opportunities for improvements they have identified, and improve their professional progression in an ethical method. The Glossary of Education Reform suggested evaluating our solution based on data collection [6].

The main treatment toxicities are summarized in (Table 2). Acute skin reaction was more in Arm A as compared to in Arm B and was found to be statistically significant (p value=0.0007). Gastrointestinal toxicities like nausea and vomiting were more in Arm A majorly Grade I and II. Vomiting was found to be statistically significant (p value=0.0138). Diarrhoea was less common.

Evaluating the solution

Elwyn and Hocking suggested that a professional development plan (PDP) will only increase when a support system is established for general purposes to establish best practices. However, PDPs are only the beginning of the process. Practitioners should conceptually the uses of this approach as their chance to learn how to learn, to adopt the organizational guidelines, and develop an approach that can be reproduced for future challenges. PDPs will work best where there is effective leadership within an organization. The leadership team should be able to communicate the importance and relevance of the program [7-9].

Conclusion

Current scientific knowledge is based largely on studies of genome-wide sequencing data from tissue samples obtained via surgery or biopsies. The genomic features of primary tumour tissues have been largely detailed and the next step is to track the natural genomic evolution of RCC throughout the course of the disease- the TRACERx Renal study has provided compelling details of these changes over time..Sylhet city is one of the divisional headquarter and City Corporation along with a increasing proportion of population and unplanned rapid urbanization threatened by various social, cultural and environmental challenges belonging with poor management, inefficiency and lack of coordination among implementing agencies combined with insufficient financial resources which are aggravating the situation gradually.

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