Simple design made a big difference - Multidisciplinary approach in Image-guided brachytherapy (IGBT) for advanced cervical cancer patients in Tuen Mun Hospital

Lo I(1), Chang A (2), Tam LK (1), Fung YL (1), Lee KK (1), Wong J (1), Lee V (1), Law WK (1), Chan T (1), Wong MC (1)

(1) Department of Clinical Oncology, (2) Department of Occupational Therapy

Keywords:
Multidisciplinary approach
Image-guided brachytherapy (IGBT)
Advanced cervical cancer patients
Brachytherapy implant supporter
Pressure relief mat

Introduction
There are around 50 patients receiving standard 2D intracavitary brachytherapy treatment per year in Clinical Oncology Department TMH. For bulky cervical tumors, MRI-based image-guided brachytherapy (IGBT) with the addition of interstitial needles have been shown to give superior local control rates and lower morbidity. (Johannes et al, 2006) There were 17 patients received IGBT approach since 2015. We formed a new IGBT team was formed from multidisciplines including Oncologists, Physicists, Oncology nurses, Radiation therapist and Occupational therapist in the New Territory West Oncology Center.

Objectives
1. To work out a clear logistic flow providing a seamless, patient focused care.
2. Enhance patient comfort by using subcutaneous syringe driver for pain control after the spinal anesthesia effect wear off.
3. Using in house designed “Brachytherapy Implant Supporter” to prevent the applicator displacement and “Pressure Relief Mat” to enhance patient comfort.

Methodology
Education and training program for all new team members involved in the IGBT pathway was provided. The competency frameworks were also developed. “Brachytherapy Implant Supporter” (T-shape custom-made pocket bag with Velcro) was designed by oncologist, occupational therapist and oncology nurse for patients...
treated with IGBT approach. A waistband is used in fixation of the supporter and is applied after insertion of applicator in Operation Theater. After treatment "Pressure Relief Mat" is used to increase patient comfort. Oncologist prescribes subcutaneous infusion with Morphine or Fentanyl via syringe driver continuously to maintain good pain control for post operation.

**Result**
A satisfaction survey of 22 Nurse was conducted concerning the use of the two devices in January 2017. The survey over 90% of staff is satisfied with the project 100% of nurses agree that these devices can prevent displacement of the implants. Patient satisfaction survey for 17 patients was conducted in January 2017. The overall satisfaction rate is 70.5%. The satisfaction includes better pain control, more comfort, decrease anxiety and applicator movement prevention. The programme has successfully implemented. The two devices had reduced the applicator displacement during and after treatment. It is beneficial for team functioning and better patient outcome.