

Radiation Induced Side-Effects in Gynecological Cancers

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Presenter Disclosure

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Mitigating Potential Bias

- Not Applicable

Common Side Effects During Radiation

- Fatigue
- Radiation Skin Reaction
- Radiation induced nausea/vomiting
- Gastrointestinal Toxicity
- Radiation Cystitis
- Sexual Dysfunction



Learning Objectives

1. Recognize the most common side effects during pelvic radiation and vaginal vault brachytherapy
2. Discuss techniques used to minimize radiation induced side effects

Fatigue

Possible Remedies Include:

- Maintaining an optimal level of activity
- Take frequent breaks during daily activities
- Avoid caffeine – limit to morning only
- Reduce Stress
- Relaxation therapy techniques
- Set priorities and pace activities – schedule activities at times of peak energy
- Keep a normal bedtime schedule (same time every night)
- Delegate responsibilities



Normal Skin



A skin assessment should be initiated at baseline, prior to initiation of the treatment, and reassessments should occur minimally at weekly treatment appointments.

Skin care should start at the beginning of treatment using a suitable emollient cream recommended by your radiation team.

Petroleum based products should be avoided. Products containing alcohol or perfumes should also be avoided.

Mild Erythema with or without Pruritus



Radiotherapy induced skin damage is seen approximately 10-14 days following the first fraction of radiation.

Symptoms: Include pink to dusky skin +/- mild edema. Burning, itching, mild discomfort.

Treatment: Skin care continues with the use of emollient cream.

A mild topical Corticosteroid cream can be used on intact skin to help with the pruritus. The steroid cream should be used sparingly along with the emollient cream.

Dry Desquamation and Erythema



Erythema: Pink to dusky colouration, mild edema, burning, itching and mild discomfort.

Dry Desquamation: Partial loss of the epidermal basal cells
Dryness, itching, scaling, flaking and peeling.
Hyperpigmentation,

Treatment: Normal saline compresses

A foam dressing can be used to decrease irritation particularly from clothing or in areas of high friction.

I.e.: groins, abdominal folds etc.

Continue to use emollient creams to areas of intact skin.

Moist Desquamation



Symptoms: Sloughing of the epidermis and exposure of the dermal layer.

- Blisters or vesicle formation, green exudate
- Serous drainage
- Pain and edema

Treatment: Cleanse with normal saline. Apply an Absorbent dressing over a non adherent dressing. Avoid any adhesive tape. Secure with a Kling or tube dressing. Take a wound swab if infection is suspected.

Antibacterial/Antibiotic creams can be used for comfort. May also require oral analgesia for pain control. In some instances a topical analgesia (compound) can be used.

Moist desquamation in the perineal area may require sitz bathes. One may also use a peri care bottle with warm saline solution post void or after diarrhea stools.

Ulceration and bleeding



Symptoms: Skin necrosis or ulceration of full thickness dermis, spontaneous bleeding.

- Pain

Treatment: Requires discontinuation of radiation. Absorbent dressing, possible packing of wound.

- May require antibiotics.
- Might require debridement

Oral analgesia – may need opioids for pain control

Radiation Induced nausea/vomiting



Treatments include:

- Smaller meals more frequently
- Choosing high protein food options
- Oral Antiemetics – Ondansetron, Metoclopramide, dexamethasone
- Ginger or Gingerale
- Cannabis – THC or CBD oils (will likely be seen more in the future)
- Referral to dietitian

Gastrointestinal Toxicity



Treatments Include:

- Diet modifications – Low fiber diet/bland diet, avoiding alcohol, coffee and acidic foods
- Supplements – Meal replacements such as Boost/Ensure
- Electrolyte replacements/drinks
- Antidiarrheal medication – Imodium, Lomotil
- Proctitis and rectal discomfort – Anusol HC, Proctosedyl (suppository or foams), corticosteroid enemas
- IV Hydration in severe dehydration

Radiation Cystitis



- Treatments include:
- Perineal Care using peri care bottle with saline solution
- Increased fluid intake – example Cranberry juice for dysuria
- Anticholinergics (antispasmodics) – for urinary urgency – oxybutynin
- Analgesics – NSAIDs for irritative voiding symptoms
- Urine Culture – If positive – antibiotics
- May require incontinent products (short term or long term)
- Rare cases – indwelling urinary catheter

Sexual Dysfunction

Pelvic Radiation + Vault Brachytherapy causes potential short term and long term side effects.



Short Term:

- vaginal irritation/itchiness
- pelvic pain
- decreased sexual interest (long and short term)

Long Term:

- vaginal dryness
- dyspareunia (painful intercourse)
- vaginal stenosis
- sterility

Treatments Include:

- Vaginal lubricants – water based lubricants recommended
- Pelvic floor strengthening exercises
- Vaginal dilator – recommended daily for first 3 months post radiation
- Sexuality counselling (Dr. Anne Katz)

References

1. BC Cancer Agency – www.bccancer.bc.ca
2. Canadian Cancer Society – www.cancer.ca
3. American Cancer Society - <https://www.cancer.org>
4. Medscape – emedicine.Medscape.com
5. Cancer Care Wound Care Guidelines