Association between Regular Vaginal Dilation and/or Sexual Activity and Long-Term Vaginal Morbidity in Cervical Cancer Survivors

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Disclosure & Study Team

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Purpose/Objective

Patients with cervical cancer treated with external beam radiotherapy, chemotherapy and internal brachytherapy

Modern advances in brachytherapy (use of MRI imaging and precise dose adaptation) → excellent tumor control and high cure rates

Standard of care, if the tumor is locally advanced and cannot be removed by surgery
Purpose/Objective

Focus on prevention and management of long-term side effects
Ensure good quality of life

Risk for vaginal side effects with impact on sexual health

Vaginal shortening/narrowing → formation of scar tissue
  - permanent changes in the vaginal tissue
  - loss of elasticity often causes pain during intercourse

Clinical recommendations for aftercare
→ regular and ongoing vaginal dilation with cylinders and/or sexual intercourse
Material/Methods

EMBRACE
{ An intErnational study on MRI-guided Brachytherapy in locally Advanced Cervical cancer }

Multi-institutional  Prospective  Observational

1416 cervical ca. patients included (2008-2015) median follow-up of 5 years

Physician-reported Vaginal morbidity

Patient-reported Quality of Life and Sexuality (questionnaires)

Baseline 3 6 9 12 18 24 30 36 48 60 …yearly

Longitudinal clinical follow-up visits (months)
Material/Methods

Sub-cohort of patients with at least 3 follow-up assessments

Regular vaginal dilation and/or sexual activity if reported in at least half of follow-ups

No or infrequent if reported in less than half of follow-ups
Results

Sub-cohort of patients with at least 3 follow-up assessments  \( N=882 \)

Regular vaginal dilation and/or sexual activity if reported in at least half of follow-ups  \( n=565 \) (64%)

No or infrequent if reported in less than half of follow-ups  \( n=317 \) (36%)
Regular vaginal dilation and/or sexual activity

significantly associated with less risk for moderate vaginal shortening / narrowing

Confirmed in multivariable model, adjusting for other risk factors
- tumor infiltration
- age
- treatment parameters
- hormonal replacement therapy

Vaginal stenosis G≥2
Regular penetration 121 events in 565 patients
No/infrequent penetration 110 events in 317 patients

37%
23%

N=882
Regular vaginal dilation or sexual activity?

5-year actuarial risk vaginal stenosis G≥2 (882 patients)

- Neither dilation / nor sex: 37%
- Only dilation / no sex: 28%
- Only sex / no dilation: 23%
- Both dilation and sex: 18%

p≤0.001
Regular vaginal dilation and/or sexual activity

significantly associated with more risk for mild vaginal dryness G≥1

significantly associated with more risk for mild vaginal bleeding G≥1

no association to vaginal mucositis (symptoms of inflammation)

Vaginal dryness G≥1
Regular 386 events in 565 patients
No/infrequent 201 events in 317 patients

Vaginal bleeding G≥1
Regular 333 events in 565 patients
No/infrequent 105 events in 317 patients

N=882
Conclusion

- Regular vaginal dilation and/or sexual activity is associated with lower risk for moderate vaginal shortening/narrowing, but higher risk for mild vaginal dryness and bleeding.

- While both of these mild symptoms can be managed with lubricants, moisturizer and/or hormonal replacement therapy, moderate vaginal shortening/narrowing represents an irreversible side effect that can cause pain during intercourse in many cervical cancer survivors.

- These long-term data support clinical recommendations for dilation and/or sexual activity after radiotherapy.