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[Intervention Review]

Vaginal dilator therapy for women receiving pelvic radiotherapy

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ABSTRACT

Background

Vaginal dilation therapy is advocated after pelvic radiotherapy to prevent stenosis (abnormal narrowing of the vagina), but can be uncomfortable and psychologically distressing.

Objectives

To assess the benefits and harms of different types of vaginal dilation methods offered to women treated by pelvic radiotherapy for cancer.

Search methods

Searches included the Cochrane Central Register of Controlled Trials (CENTRAL 2013, Issue 5), MEDLINE (1950 to June week 2, 2013), EMBASE (1980 to 2013 week 24) and CINAHL (1982 to 2013).

Selection criteria

Comparative data of any type, which evaluated dilation or penetration of the vagina after pelvic radiotherapy treatment for cancer.

Data collection and analysis

Two review authors independently assessed whether potentially relevant studies met the inclusion criteria. We found no trials and therefore analysed no data.

Main results

We identified no studies for inclusion in the original review or for this update. However, we felt that some studies that were excluded warranted discussion. These included one randomised trial (RCT), which showed no improvement in sexual scores associated with encouraging women to practise dilation therapy; a recent small RCT that did not show any advantage to dilation over vibration therapy during radiotherapy; two non-randomised comparative studies; and five correlation studies. One of these showed that objective measurements of vaginal elasticity and length were not linked to dilation during radiotherapy, but the study lacked power. One study showed that women who dilated tolerated a larger dilator, but the risk of objectivity and bias with historical controls was high. Another study showed that the vaginal measurements increased in length by a mean of 3 cm after dilation was introduced 6 to 10 weeks after radiotherapy, but there was no control group; another case series showed the opposite. Three recent studies showed less stenosis associated with prophylactic dilation after radiotherapy. One small case series suggested that dilation years after radiotherapy might restore the vagina to a functional length.



Authors' conclusions

There is no reliable evidence to show that routine, regular vaginal dilation during radiotherapy treatment prevents stenosis or improves quality of life. Several observational studies have examined the effect of dilation therapy after radiotherapy. They suggest that frequent dilation practice is associated with lower rates of self reported stenosis. This could be because dilation is effective or because women with a healthy vagina are more likely to comply with dilation therapy instructions compared to women with strictures. We would normally suggest that a RCT is needed to distinguish between a casual and causative link, but pilot studies highlight many reasons why RCT methodology is challenging in this area.

PLAIN LANGUAGE SUMMARY

Vaginal dilator therapy for women receiving pelvic radiotherapy

Background

Pelvic radiotherapy for gynaecological (uterine, cervical, vaginal) and anorectal cancer may damage the vagina. It may cause the vagina to shrink and can make the sides stick together. It has become established practice to recommend regular vaginal dilation after radiotherapy to reduce or prevent this risk. Dilation involves inserting and rotating a phallus-shaped appliance in the vagina approximately three times a week for about five minutes to stretch the skin.

Review question

This updated review re-appraised all the literature and retrieved all available data on this topic to see if there was any evidence to support vaginal dilation after pelvic radiotherapy.

Main or key findings

Women who want to preserve the length of their vagina after radiotherapy should consider dilation. There are limited data from observational studies that suggest regular stretching of the vagina, once radiotherapy treatment is completed, might reduce the risk of scaring by a small amount. There is no evidence to support dilation therapy during radiotherapy. There are also case reports and one case series suggesting that dilation months or years after radiotherapy might help restore vaginal length.

Quality of the evidence

Randomised trial design has not, and may never, obtain high-quality evidence to assess vaginal dilation therapy. The available studies suggest, but cannot prove, that dilation works. However, this only applies once the radiotherapy has finished. There is an association between vaginal dilation after radiotherapy and less vaginal stenosis, but this is not proof that the benefit is due to dilation. The link between dilation and less stenosis could either be due to a beneficial effect of dilation or because women with stenosis (or who self report stenosis) are less able to use the dilator.