Extending the interval for cervical screening in relation to HPV risk

The interval between cervical cancer screenings could be safely extended from five years to 10 for women aged 40 and older who test negative for human papillomavirus (HPV), according to a Dutch research study (Dijkstra et al, 2016). In the UK, women aged 25-49 are invited for cervical screening every three years, then every five up to the age of 64.

The researchers assessed the safety of extending screening intervals beyond five years for certain groups of women. They analysed follow-up data from 44,000 women aged 29-61 years who were screened between 1999 and 2002. The women were randomised to two groups – either cytology and HPV testing or a control group of cytology with blinded HPV testing – and managed depending on their test results. Follow-up data was collected until July 2013, when all women had been offered three rounds of screening.

Data analysis compared cumulative incidences of cervical cancer and cervical intraepithelial neoplasia (CIN3+, the highest grade of abnormal cells) among women who were HPV negative and double negative (negative to HPV and cytology) from the intervention group with those of the controls who were cytology negative. The effect of age on cervical cancer and CIN3+ incidence among women who were HPV negative and double negative was also analysed.

In the intervention group, incidences of cervical cancer and CIN3+ among women with a negative HPV test were compared with those individuals with an HPV-positive test and negative triage testing. After the third screening round, the incidence of cervical cancer among women who were HPV negative and double negative from the intervention group was similar to that among controls who were cytology negative after the second round.

What we already know
- Screening for high-risk human papillomavirus (HPV) or combined HPV and cytology testing leads to earlier detection of CIN3+ than cytology, and provides better protection against cervical cancer
- There is limited evidence on extending screening intervals
- Several countries plan to implement HPV screening as the primary screening test or in combination

What this research adds
- Screening programmes based on HPV testing should be implemented with HPV-related risk stratification
- Data on cervical cancer risks related to age is not conclusive so monitoring of the rate of interval cancers and further research is needed

This indicates that a negative HPV test provides longer reassurance against cervical cancer than negative cytology.

The researchers concluded that women who are HPV negative and aged over 40 have a very low risk of CIN3+, justifying the plan in the Netherlands to change the screening interval from five years to 10 for this group. However, extending screening intervals for women who are HPV positive is not recommended, as their long-term risk of CIN3+ is at least five times higher than for women who are HPV negative.

The researchers acknowledge there is a risk of an increase in interval cancers, and say the number seen under the HPV-based screening regime should be monitored closely. They conclude: “Tailoring screening to individual risks could improve screening efficiency and eventually provide optimal prevention for all women. However, risk stratification also adds to the complexity [...] and it could become challenging to maintain a high-quality screening programme.” NT

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