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Stage distribution of cervical cancer after diagnosis of atypical glandular cells in cervical screening

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Background / Objectives

In a nationwide cohort study we followed more than 3 million Swedish women for cervical screening, diagnosis of pre-cursors and risk of cervical cancer (Wang et al, 2016). Our aim was to assess the risk of cervical cancer after cytological diagnosis of atypical glandular cells (AGC), compared to high-grade (HSIL) and low-grade cervical lesions (LSIL), as well as a normal Pap smear. Women with AGC had a risk of incident cervical cancer that was higher than for HSIL for up to 6.5 years, and particularly for adenocarcinoma, while the chance of finding prevalent cancer was lower than for HSIL but higher than for LSIL. Since we did not have complete stage information in this large cohort study, we decided to utilize the case series from an ongoing nationwide Case-Control Audit, with complete information on clinical stage at diagnosis. Our aim was to assess the distribution of clinical stage for cervical cancer cases occurring after AGC, by main histology, and stratified on prevalent and incident cases of cervical cancer.

Methods

In the updated Swedish national Case-Control Audit all 4254 cases of invasive cervical cancer from 2002 to 2011 were clinically and histopathologically verified, and age-matched to 30 population-based controls in a nested case-control design. Screening histories were retrieved from the Swedish National Cervical Screening Registry (www.nkcx.se/index_e.htm). In this preliminary analysis we utilized 351 cases with a first diagnosis of AGC in screening. Data were summarized into contingency tables by clinical FIGO stage, main histologic types (squamous cxa or adenocarcinoma), and prevalent (<6 months between diagnosis of AGC and cancer) or otherwise incident cancer. Chi square tests were applied.

Results

Preliminary results show that the stage distribution of cervical cancer for women with AGC was 29%, 58%, and 13% for stages IA, IB, II+, respectively. Cancers with prevalent cases were shifted towards earlier stages, compared to incident cases ($p=0.01$), but when stratifying on histological type there was no statistically significant difference in stage distribution between prevalent and incident cases ($p=0.27$ and $p=0.08$ for adenocarcinoma and squamous cxa, respectively). Although the majority of cases were diagnosed at stage IB for both histological types, the proportions of stages IA and II+ were higher for squamous cxa than for adenocarcinoma ($p<0.001$).

Conclusion

We found that more than half of cxa cases after AGC were diagnosed at stage IB, and almost 1/3 were diagnosed at stage IA. For prevalent cases the stage distribution was further shifted towards early stages, although most of this shift seemed to be explained by the histologic type of the cancer.

References

Wang J, Andrae B, Sundström K, Ström P, Ploner A, Elfström KM, Arnheim-Dahlström L, Dillner J, Sparén P. Risk of invasive cervical cancer after atypical glandular cells in cervical screening: nationwide cohort study. *BMJ*. 2016 Feb 11;352:i276. doi: 10.1136/bmj.i276

