

Aspects of cervical cancer and cervical cancer prevention in the Nordic countries

Summary.

The Nordic region is an interesting place to study cervical cancer and its prevention. The countries have quite similar economical, historical and to some extent also cultural backgrounds, but differ in other matters, some related to health. Many aspects of cervical cancer and its prevention have been studied for these countries, but there are still areas of missing knowledge. Some were covered by the four papers included in this thesis.

In the first paper, the long-term trend of cervical cancer in Greenland for the period 1950-2009 was described. The pattern turned out to be rather unique. The incidence was initially very low, but in the 1970's and the 1980's it then increased to one of the highest incidences ever recorded in the world. Hereafter the incidence decreased somewhat to the current level of around 25 per 100,000 (ASW). The most evident explanation behind the increase was a change in sexual behaviour, most likely fuelled by the dramatic economic and social transition that took place in Greenland from the 1940's to the 1960's. The later decrease is probably mainly to be attributed to cervical cancer screening.

In the second paper, a population-based register study was undertaken to evaluate predictors of nonparticipation in cervical cancer screening in a 5-year period in Denmark. The strongest predictors were found to be: non-use of dental service, low use of general practitioners, age above 40 years, low education level, not being married and having a foreign nationality. Different ways to increase screening coverage of screening were discussed, and it was emphasized that it will be important to target non-participating women more directly since they will be hard to reach through other contacts with the health care.

The last part of the thesis treated the more novel preventive measure of HPV vaccination.

In the third paper, the introduction of HPV vaccination in the Nordic countries was reviewed. It was found that the pace at which the organized vaccination was initiated differed among the countries. Denmark and Greenland, which both have a high risk of cervical cancer, started HPV vaccination as early as 2008, while in Finland, a country with a very low incidence, the introduction was only recommended by 2011. Particularly in Denmark and Norway, there was an intense debate sustained by special interest groups and the vaccine manufacturers. This debate produced pressure on the public health authorities to consider the evidence for and against HPV vaccination, and on politicians to weigh the wish for cervical cancer protection against other pertinent health issues.

Finally, in the fourth paper, a population-based register study was performed, evaluating the association between mothers' use of cervical screening and their daughters' use of HPV vaccination. It was established that daughters of unscreened mothers were 2-3 times more often unvaccinated compared to screened mothers. In addition, when using the mothers' screening status as a proxy for the daughters' future screening status, it was found that only few percent of girls will remain both unscreened and unvaccinated in the future. The latter result is reassuring, when considering cost effectiveness of the two-tiered programme consisting of screening and vaccination. However, actual screening behaviour in organized programmes among mass vaccinated women will have to be investigated in the future.

