Proteomic analysis of cervical cancer for an early diagnosis by two-dimensional gel electrophoresis

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Abstract

Worldwide, cervical cancer is a leading cause of cancer morbidity and mortality in women, but they do not know any symptoms of disease at early stage. If the cancer has spread to nearby tissues, symptoms may include vaginal bleeding. It is difficult to cure at later stage, so that an early diagnosis is very important. In this study, we research to find the marker protein that up or down regulate at each stage for an early detection of cervical cancer. We disrupted cervical cancer tissue and lysis cell for sample preparation. Prepared protein seperated by two-dimensional (2-DE) gel electrophoresis and staining by silver nitrate. The spots on the 2-D gel compared with other spots at the other stages. It appears that some different spots are shown in specific part of gel at each stages. If the specific proteins at each stages used to cervical cancer marker protein, it might be used in the early diagnosis of cervical cancer.

References

1. Susan K. Keesee, Jason Marchese, Abelardo Meneses, Darren Potz, Claudia Garcia-Cuellar, Robert P. Szaro, Gilberto Solorza, Alvaro ornio-Vargas, Alejandro Mohar, Jaime G. de la Garza, Ying-Jye Wu, Human Cervical Cancer-Associated Nuclear Matrix Proteins(1998), EXPERIMENTAL CELL RESEARCH, 244, 14-25.
2. Yoon Pyo Choi, Suki Kang, Sunghee Hong, Xianhe Xie, Nam Hoon Cho, Proteomic analysis of progressive factors in uterine cervical cancer(2005), Proteomics(5), 1481-1493.
3. Richard J. Simpson, Proteins and proteomics(2003), COLD SPRONG HARBOR LABORATORY PRESS, 163-218.