Cervical cancer: Risk factors, symptoms and overview of the disease

In general, cell cycle is tightly regulated, whereas, in cancer the cell division is faster without any regulation and checkpoint. Current research at DBT’s National Institute of Biomedical Genomics (NIBMG), Kalyani, focuses on understanding many aspects of the cervical cancer especially the genes/pathways abnormally regulated in it, and how viral protein interact host protein to deregulate normal cellular pathway to initiate the infection and cervical cancer development. The area of focus is to understand what makes the cells undergo continuous cell growth and division followed by HPV16 virus infection.

Cervical cancer occurs due to changes in the cells of a women’s cervix, which connects womb (uterus) with vagina of a female. This cancer affects deeper part of the vagina and it has the capability to spread (Metastasize) other parts of the body usually vagina, rectum, liver, lungs and bladder. Most of the cases of cervical cancer are caused by a viral infection called Human papillomavirus. It is a slow growing cancer type and it is diagnosed by colposcopy/ Pap test.

Risk factors for cervical cancer include starting to have sex before the age of 16, having multiple sexual partners, taking birth control pills especially for more than 5 years, having more number of children, smoking, having a weakened immune system and having Sexually transmitted disease (STD) e. g., AIDS. Symptoms of cervical cancer include experiencing pain during sex, unusual vaginal bleeding such as after sex, between periods or after menopause, unusual vaginal discharge, pelvic pain, weight loss and lack of appetite.

There is more than one type of cervical cancer based on cells such as squamous cell carcinoma which arises in the cell lining of the cervix and is observed in 90% of the cases,
Adenocarcinoma, arises in the cells that produce mucus and mixed carcinoma which has the futures of both the types of cancer. The treatment options may vary depending on the stage and severity of the disease. In general, chemotherapy (anti-cancer drugs) and radiotherapy or combination of both is the most popular treatment options.

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