

# A Shot In Time

Cervical cancer is one of the commonest forms of cancer affecting Indian women. But it is preventable, says **Gita Mathai**

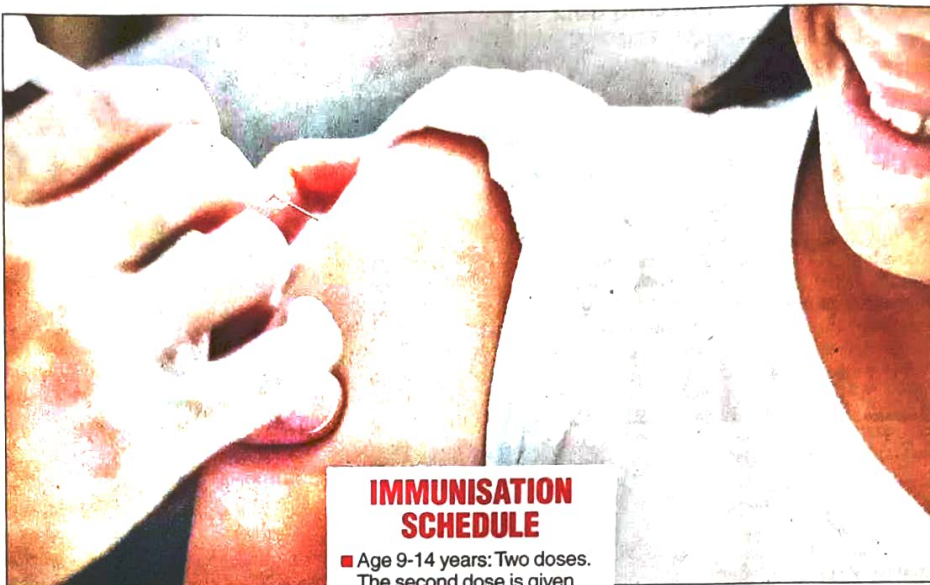
**C**ancer, derived from the Latin word for crab, is a frightening disease because like the animal it is named after, it spreads relentlessly, extending its reach into surrounding tissues and distant organs. Cancer is not a new disease. Evidence of cancer has even been found in Egyptian mummies.

The global burden of cancer is enormous. Current statistics suggest that one in five people will develop cancer during their lifetime. Although the incidence of cancer appears higher in developed countries, largely because people live longer, mortality rates are often greater in developing nations such as India. Inequalities in healthcare access, lack of screening, delayed diagnosis and financial constraints make a bad situation worse.

Prevention is always better than cure. Since no single factor is responsible for all cancers, several risk factors have been identified. These include unhealthy dietary habits, obesity, smoking, alcohol consumption, physical inactivity, environmental pollution and certain kinds of sexual behaviour.

Against this background, it came as a major scientific breakthrough when researchers identified a specific infectious agent responsible for a large proportion of cervical cancers. In 1974, the German virologist Harald zur Hausen proposed that the human papillomavirus (HPV) was responsible for cervical cancer. Subsequent research confirmed that HPV types 16 and 18 account for approximately 70-80 per cent of cervical cancers in India.

However, infection alone does not inevitably lead to can-



## IMMUNISATION SCHEDULE

- Age 9-14 years: Two doses. The second dose is given 6-12 months after the first
- Age 15-26 years: Three doses. The second dose is given 1-2 months after the first. The third dose, six months after the first
- The vaccine may be given up to the age of 45 years in previously unvaccinated or incompletely vaccinated individuals after consultation with a healthcare provider.

scientists began working on a vaccine. After years of research, highly effective vaccines were developed. In India, the commonly available vaccines are Cervarix and Gardasil. Even a single dose offers substantial protection against HPV infection and cervical cancer.

The benefits of HPV vaccination extend beyond cervical cancer. By preventing infection with

cancer-causing HPV strains, the vaccine also reduces the risk of cancers of the penis, anus, vulva, vagina and oropharynx (throat), as well as genital warts.

The vaccine does not contain a live virus and cannot cause HPV infection. Instead, it stimulates the immune system to produce antibodies. These antibodies remain in the body and rapidly neutralise the virus if exposure occurs later in life.

**I**nitially, HPV vaccination was recommended primarily for girls. Today, experts recommend vaccination for both boys and girls. Immunised boys are protected against penile, anal and throat cancers and are less likely to transmit the infection to future partners.

Recognising its importance, the Government of India has in-

corporated HPV vaccination into the national immunisation programme for adolescent girls. A single dose given around 9-14 years of age provides excellent protection. Studies from India and around the world have shown that one dose can provide a strong and sustained immune response, with effectiveness ranging from 90 to 100 per cent against HPV types 16 and 18.

Unfortunately, many parents are unaware of the vaccine or postpone immunisation because cervical cancer seems like a distant possibility. Since HPV-related cancers may not develop until decades after infection, vaccination is often overlooked despite its tremendous preventive value.

The vaccine is administered as an intramuscular injection, usually into the deltoid muscle of the upper arm. In young children, it may also be given in the anterolateral thigh. It should not be injected into the buttocks.

**T**he injection feels similar to any routine vaccination.

Since the vaccine does not contain live HPV, it cannot cause the disease. Side effects are generally mild and temporary. Some people experience soreness, redness or swelling at the injection site. Mild fever, headache or muscle aches may occur. Occasionally, adolescents may feel faint after any vaccination, so it is advisable to remain seated or lying down for about 15 minutes afterwards.

Cancer remains a major killer worldwide. If a simple injection can prevent several forms of cancer caused by HPV, it makes sense to protect both ourselves and our children. Vaccination today can prevent suffering decades later.