

medical sciences

Herpes virus in cervical tumor

The thrust to find a viral cause for various cancers continues, and herpes viruses are some of the main DNA virus candidates. In the 1960's, British scientists Michael Epstein and Y. M. Barr cultured a herpes virus from blood cells from patients with Burkitt's lymphoma. In September 1971, researchers at the Sloan-Kettering Institute for Cancer Research in New York City reported strong evidence for the presence of herpes-type particles in lymph cells cultured from patients with Hodgkin's disease. Now, a team at the University of Chicago, headed by virologist Bernard Roizman, has found a fragment of herpes in a human cervical tumor.

The fragment contained 39 percent of the DNA normally found in the herpes simplex 2 virus. Viral DNA was also found linked to the DNA of the cervical tumor cells, indicating that the viral DNA had integrated into the tumor cell chromosomes and had caused malignancy.

Details of this finding will appear in the December PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES.

Pregnancy from transplanted ovary

Last March, a surgical team in Buenos Aires headed by Raul Blanco transplanted an ovary into a woman who could not have children. The woman is now pregnant. Last week Blanco announced, at the Brazil-Israeli Congress of Fertility and Sterility in São Paulo, that "the pregnancy is already more than three months in progress and is completely normal." If the pregnancy proceeds to term and the woman has a successful delivery, it will be the first case known of a birth resulting from an ovary transplant.

The genetic characteristics of the baby will be those of the woman who donated the ovary—not of the recipient. Blanco acknowledges this might create psychological problems for both women. Nonetheless all the other processes of motherhood—conception, implantation of the egg in the uterus, pregnancy, birth and rearing of the child—belong to the recipient.

Slaying the primitive anaerobes

Anaerobic bacteria (those able to live without oxygen) are the most primitive and prevalent bacteria in the human body. They outnumber aerobic bacteria a thousand to one in the colon and ten to one in the skin, mouth and vagina. Although anaerobes may protect a person against pathogenic microbes, they too may become pathogens under the right circumstances, causing serious conditions.

Clinical microbiologists have had trouble determining which antibiotics kill anaerobes. However laboratory studies have suggested that many are susceptible to the drug lincomycin, and nearly all to the drug clindamycin. In the Nov. 16 NEW ENGLAND JOURNAL OF MEDICINE, John G. Bartlett of the Veterans Administration Hospital in Sepulveda, Calif., and his team, report clinical evidence to support the in vitro findings.

Ten of 11 patients with serious anaerobic infections responded favorably to lincomycin. All 14 patients with serious anaerobic infections put on clindamycin responded favorably to it. "The data," the authors state, "suggest that these agents, particularly clindamycin, are useful in the therapy of anaerobic infections."

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behavioral sciences

Childhood schizophrenia

Victims of childhood schizophrenia are sometimes so withdrawn and psychotic they never learn any of the basic activities (speech, feeding, dressing) that might allow them to function with some degree of normalcy. Researchers at New York Medical Center are testing various drugs as a part of a total therapeutic program. One of the drugs, triiodothyronine (T_3) has been successfully used by Magda Campbell in her work with severely disturbed children from three to six years of age.

In the past, T_3 has been used to treat patients with thyroid gland deficiency and adults with schizophrenia or depression. Now, says Campbell, T_3 has proved to be one of the most effective therapeutic agents used to treat children. It has stimulating and antipsychotic properties without serious side effects. The 20 children she treated with T_3 became less withdrawn and more responsive. Hyperactivity, impulsivity and negativism were decreased to such an extent that the children were able to learn such things as language and vocabulary production. Much of the new knowledge persisted after treatment stopped.

Psychological effects of dialysis

The artificial kidney machine saves lives but at the same time can create psychological problems that work against its effectiveness. The patient whose kidneys have failed is forced into an emotional dependency on the machine and on the people training him to use it. The typical patient, said Duncan Burford of Louisiana State University last week at the annual meeting of the National Kidney Foundation, experiences a deep anger due to his feelings of loss of health, independence and prospects for a normal future. This anger is often released as aggression toward family and medical personnel trying to teach the patient to use the machine. If these psychological problems are not treated promptly, says Burford, they can get worse. The patient's non-cooperation can keep him from learning to use the machine. The longer the patient is off the machine, the more chance there is of brain damage due to the nonfunctioning kidneys. The more brain damage, the harder it is to teach the patient to use the machine. This is also an argument, says Burford, for early delivery of kidney machine treatment to patients.

Down on the farm

It has been predicted that the communications explosion and an increasingly mobile population would produce a melting-pot effect with rural and urban attitudes eventually fusing or coming together. This has not happened, say sociologists at Pennsylvania State University in University Park, Pa.

Fern K. Willits, Robert C. Bealer and Donald M. Crider analyzed the results of questionnaires completed by high-school sophomores in 1947, 1960 and 1970. All the young people expressed more permissive ideas in 1970 than in previous years, but, in general, the differences among rural-urban attitudes are stronger than in the past. These results, the researchers affirm, show the need to continue to recognize the distinctions between rural and urban ideas and behaviors when working with people.

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