

BIOMEDICINE

Arteriosclerosis: Virus-induced?

A number of factors have been implicated in heart disease: arteriosclerosis (hardening of the arteries), high blood pressure, cholesterol, a "Type A" personality, soft water and smoking. Now there is another possible culprit — herpes virus.

Catherine G. Fabricant of the New York State College of Veterinary Medicine in Ithaca, N.Y., first suspected a herpes virus role in arteriosclerosis while investigating a cat herpes virus. She observed the formation of fat droplets and cholesterol crystals in cell cultures infected with this herpes virus. These changes were shown to be specifically induced only in the cell cultures infected with the virus, leading to the hypothesis that herpes virus infection could play a role in the development of the fat and cholesterol-containing lesions characteristic of arteriosclerosis. Fabricant organized a research team to test the hypothesis.

She and her colleagues have now found that herpes virus produces arteriosclerotic damage in large heart arteries and other major arteries of experimentally infected chickens. These results are of particular significance, the investigators believe, because the arteriosclerotic lesions closely resemble chronic arteriosclerosis in people. Because herpes viruses are widespread in the human population, it is possible that one or more of them may play a similar role in the human disease.

Tumors: Some provocative differences

Secondary tumors, not primary ones, constitute the real life threat to cancer patients. Some provocative differences between these two kinds of tumors, at least in mice, are now revealed by Michael Feldman and his colleagues at the Weizmann Institute in Rehovot, Israel.

A primary tumor acts to retard the appearance of secondary growths. Once the primary tumor is removed surgically, there is a sudden, unexpected spurt in the number of secondary growths. This is unrelated to the physical trauma of the surgery itself. Apparently some substance of the primary cancer, reduced or eliminated by surgery, retards the growth of secondary cancers either directly or indirectly via the immune system. Cell membranes in secondary growths were also found to differ from those in primary growths.

Health insurance for hypertension screen

A handful of enlightened U.S. employers, labor unions, physicians and nurses have found that high blood pressure screening at the work site can dramatically reduce this major cause of heart attacks and strokes (SN: 12/11/76, p. 377).

Now the Blue Cross Association, with finances from the National Institutes of Health, is conducting a two-year study to see whether insurance coverage for such on-the-job coverage is cost-effective. If so, then Blue Cross will offer such coverage to its group health prepayment subscribers.

Biochemistry and schizophrenia

Whether or not schizophrenia is due to biochemical disturbances is a question that remains to be answered. Nonetheless, evidence for such a basis continues to build. For instance, Steven G. Potkin of the National Institute of Mental Health and his colleagues report in the Jan. 12 *NEW ENGLAND JOURNAL OF MEDICINE* that a crucial enzyme involved in the degradation of chemicals important to behavior — monoamine oxidase — has less activity in chronic schizophrenics than in healthy persons. In fact, the enzyme shows even less activity in paranoid schizophrenics than in nonparanoid schizophrenics, suggesting that the two diseases may be separate disorders.

BEHAVIOR

The case of the bogus pregnancy

A number of anti-abortionists have pointed to the potential danger of liberalized abortion laws paving the way for racial genocide aimed at blacks or other minorities. To test this theory, a group of researchers circulated a fictional case file of a pregnant woman to 42 white abortion counselors (38 females and 4 males) in Atlanta, Ga., and Memphis and Nashville, Tenn.

The "bogus" woman was described as an underachieving high school junior with a minor record of social deviancy, unmarried and ambivalent about having the baby. For half the counselors she was designated as white, and for the other half black. Each counselor rated the pregnant woman in a number of social and emotional categories and finally on whether or not she should have the child.

"A stronger preference for abortion when the patient was black-identified was not found," report Brenda Crossley and Lawrence J. Weitz of the George Peabody College for Teachers and Stephen I. Abramowitz of the University of California at Davis School of Medicine. Though 33 of the counselors preferred abortion, they did so equally in white and black cases. "The present data provide no support for the racial genocide hypothesis," conclude the researchers.

IQ scores: Money isn't everything

Now that even Arthur Jensen concedes that environment, as well as genetics, plays a role in a youngster's IQ score (SN: 6/18/77, p. 390), the question remains as to which environmental factors are most important in measured intelligence. A family's socioeconomic status has long been thought to be a key factor, but a study of 105 black and white three-year-olds indicates that even more important is the non-economic home environment, primarily the emotional support and stimulation that parents provide the youngster. The results, reported in the December *JOURNAL OF EDUCATIONAL PSYCHOLOGY*, indicate that these home interaction measures predict IQ as well or better (especially with black children) than socioeconomic factors. The research was performed by Robert H. Bradley and Bettye M. Caldwell of the University of Arkansas at Little Rock and Richard Elardo of the University of Missouri at St. Louis.

Female fantasies

Although societal beliefs and mores might have indicated otherwise in the past, sexual fantasizing is by no means limited to men. And for those traditionalists who still would rather not believe that females could have such thoughts, consider the results of a recent survey of 102 University of Utah women students.

The one-year study, reported in the December *PERCEPTUAL AND MOTOR SKILLS*, reveals that 99 percent of the women — aged 19 to 45 — engaged in sexual fantasy at least occasionally. More than eight of 10 women experienced at least four different kinds of fantasies (for example, "seducing a man," "being overpowered," etc.), and the "average" woman had 16 different kinds of fantasies occasionally and five kinds frequently, report researchers Darrell H. Hart and Jerri J. Brown.

The results show that sexual fantasy increased with age from the late teens until the middle twenties and leveled off until the mid-thirties, and dropped off sharply by the mid-forties. Taking into account all the factors measured in the survey, the researchers say that "the woman who is older, sexually experienced, more anxious, more independent and holds more liberal views toward women's roles will tend to have more sexual fantasies than the woman who is younger, a virgin, less anxious, more passive and holds more traditional attitudes."