



cause of the high costs of private treatment.

The military's health care model has left both public hospitals and the national insurance plan, FONASA, badly underfinanced. Today's public-health budget, which is supposed to cover the needs of 75% of Chileans, equals about US\$1.9 billion annually, while private insurance companies have budgets totalling about US\$1.8 billion annually. The cutbacks combined with rising costs to eat away at the system, and no one is quite sure where to find the financing to improve it.

Alex Figueroa, the health minister, says the government's bid to recover the subsidy would provide money to cut through lengthy waiting lists for surgery and to upgrade facilities and improve service in the public system. Opposition leaders say that if the subsidy is cut up to a million people could be forced out of the private

system and back into the public system, causing it to collapse. Proponents deny this, saying the number will not exceed 113 000. If the bill passes the government will gradually eliminate the subsidy, starting in 1998. — © *Lake Sagaris*

Physician member of hit team, paper says

A physician participated in a well-publicized assassination attempt in Jordan that prompted Canada to recall its ambassador from Israel. The *New York Times* reports that the bungled attempt to kill a leader of Hamas, a radical Palestinian group tied to a string of suicide bombings in Israel, involved 8 agents from Mossad, the Israeli secret service. At least 2 carried forged Canadian passports, a move that prompted an angry backlash from the federal government. The *Times* says 1 of the

agents was a physician, who carried an antidote, naloxone, which would be used in case of an accident involving the drug that was to be used to kill the Hamas leader, fentanyl. He survived the assassination attempt, and 2 Israeli agents who had been posing as Canadian tourists were captured.

Remembrance Day event focuses on women

The Canadian Society for International Health marked Remembrance Day during its fourth annual Canadian Conference on International Health. In a special plenary session held Nov. 11, speakers focused on "peace-building" and war's impact on women. Participants at one workshop discussed how land mines as a development issue, while another looked at the priorities facing women who want to work for peace.

Research Update • *Le point sur la recherche*

Antibiotic treatment shows promise in preventing MIs

As reported in a previous issue (Catching a culprit in the act. *Can Med Assoc J* 1997;156:341), Canadian researchers have shown that infection with a common respiratory bacterium, *Chlamydia pneumoniae*, can cause atherosclerotic lesions to form in the aortas of rabbits.

Now researchers in England have used antibiotic drugs to treat patients who have had a myocardial infarction and have high titres of antibody to *C. pneumoniae* (*Circulation* 1997;96[2]:404-7). Patients treated with azithromycin had a fivefold lower incidence of subsequent cardiovascular events (death, unstable angina or myocardial in-

farction, or coronary angioplasty or urgent coronary artery bypass grafting) than patients who didn't receive the treatment.

There is clearly a link between *C. pneumoniae* infection and coronary heart disease, but the nature of the link and the way in which the infection affects the arteries are still unclear, according to Dr. Sandeep Gupta of St. George's Hospital Medical School in London, principal author of the study. "We cannot explain about 40% to 50% of the differing prevalence and severity of heart disease through traditional risk factors such as smoking and cholesterol levels," he explained. "Of the proposed infective risk factors, *Chlamydia pneumoniae* is the most likely candidate. However, no one knows exactly whether the in-

fection is a primary factor or a perpetuating factor."

In other work presented at the American College of Cardiology meeting in March 1997, Gupta looked at the immunologic effects of high titres of antibody to *C. pneumoniae* and of lowering the antibody level. He hypothesizes that infection could lead to heart disease directly, through endothelial damage to arteries, or indirectly, by activating monocytes, which causes a cascade of events involving an inflammatory and prothrombotic response. Antibiotic treatment lowered levels of markers of inflammation and led to clinical benefits for patients recovering from a myocardial infarction. In many of the patients studied, said Gupta, *C. pneumoniae* infection appeared to have a



chronic, active course. "There is a group of cardiac patients who perhaps don't clear the infection as effectively."

He chose azithromycin for the study because of its effectiveness against *C. pneumoniae* and its high tissue levels, and particularly high intramacrophage levels, achieved with a short (3-day) course. The study was funded by the British Heart Foundation, and the drug manufacturer was involved only in supplying the drug and placebo. Although the study sample was small (213 patients), Gupta said larger studies involving 2000 to 3000 patients are planned.

He cautioned that it is premature to start screening patients or prescribing antibiotics. "At this point, there is no way we are prescribing antibiotics to any of our cardiac patients. Antibiotic regimens have to be carefully thought out — the best drug, the correct dosage." He estimates that the value of antibiotic treatment will be determined in about 2 years, when results from larger studies are in. Positive results will have widespread implications for patients around the world. — *Carolyn Brown*

In the news . . .

Growth-hormone therapy and breast size

To duplicate the effect of growth-hormone therapy on aging women, researchers provided growth hormone or insulin-like growth factor I to aging female rhesus monkeys (*Nature Med* 1997;3[10]). They found that the 2 hormones resulted in twofold to fivefold increases in mammary glandular size and the epithelial proliferation index. The study suggests that the use of growth-hormone therapy in older

women carries a serious risk of breast hyperplasia.

Genetic immunity to HIV leading to new therapy

Some people are naturally immune to HIV infection, thanks to a genetic defect in CC-chemokine receptors (CCR)-5, the principal coreceptor for HIV. Researchers have found a way to "knock out" CCR-5 in human cells, mimicking the natural resistance found in people with the genetic defect (*Proc Natl Acad Sci USA* 1997;94:11567-72). They have invented a modified CC-chemokine called an "in-trakine" that may form the basis of a new form of therapy for HIV.

Viral cause of MS?

Researchers are wondering whether multiple sclerosis (MS) may be kick-started by a viral infection. In a mouse model of MS, a viral infection has been shown to cause the

demyelination characteristic of MS (*Nature Med* 1997;3[10]). Theiler's murine encephalomyelitis virus causes the MS-like disease through a process called "epitope spreading," which may be the mechanism in other virus-induced autoimmune diseases.

Key clue to Alzheimer's disease

Amyloid-beta plaques that form in the brains of patients with Alzheimer's disease are believed to cause the neurodegeneration associated with the disease. However, it is unclear how the plaques are involved. Now researchers have found that amyloid-beta binds a newly discovered polypeptide, endoplasmic-reticulum-associated binding protein (ERAB), in neurons (*Nature* 1997;389:689). The toxic effect of amyloid-beta on neurons is enhanced by ERAB, thereby contributing to the neuronal dysfunction in Alzheimer's disease.

Herbal remedy for dementia proven effective

In its contribution to the global theme issue on aging, *JAMA* reported the results of a placebo-controlled, double-blind, randomized trial of a plant extract that is in common use in Germany in the treatment of dementia (*JAMA* 1997; 278:1327-32). Patients given an extract of *Ginkgo biloba* known as EGb showed modest but statistically significant improvement, as measured by 3 objective tests of cognition and caregivers' impressions of change. The study is one of the first to evaluate a herbal remedy scientifically. Researchers believe that the compound delays progression of dementia by 6 months to a year.

Tanis Stolar photo



Ginkgo trees like this may soon do more than provide shade