



new patients Dec. 16 after the Ontario Medical Association reached a tentative agreement with the provincial government.

Hockey helmets work if you wear them

Hockey helmets and face masks that are certified by the Canadian Standards Association have virtually eliminated eye injuries — among those who wear them. While this includes all minor league and junior players under the jurisdiction of the Canadian Hockey Association (CHA) and Canadian Hockey League, it excludes about half of Canada's hockey players, including the 100 000 men playing on the 3000 teams in the Canadian Oldtimers Hockey Association.

The Canada Safety Council says that in 1974–75, before face protectors were required by the CHA, Canadian hockey players experienced 258 eye injuries, including 43 blinded eyes; the average age of the injured players was 14. In 1992–92 only 31 eye injuries were reported, including 4 blinded eyes, but none of the injured players was wearing a face protector and the average age of injured players had risen to 33.

Attempts to identify culprits may not be in "vein"

Scientists in Britain have discovered that vein patterns on the back of hands are as unique as fingerprints or DNA. This type of identification could help in the fight against credit-card fraud or thefts from cash dispensers, and help control access to buildings, computers and countries. The British Technology Group (BTG) of London has developed a scanner capable of picking out the vein print map by using a black-and-white camera illuminated with near infrared light. Vein checking is a "physical biometric" that is more so-

cially acceptable and less intrusive than retina scanning or fingerprinting, BTG says.

Program at Toronto hospital focuses on gay-bashing victims

A Toronto hospital's project to help emergency staff provide care for victims of lesbian and gay bashing has been made available to hospitals throughout North America. The Wellesley Central Hospital has assembled an educational manual, literature review, emergency-room protocol and educational video as part of its project, *Behind the bruises: confronting hate-motivated crimes against lesbians and gay men* (*Can Med Assoc J* 1996;155:89). The objective is to provide treatment that deals with both the physical and emotional trauma of these assaults. Information is available from the Wellesley's Department of Public and Community Relations, 416 926-7614; fax 416 926-5120.

Private-insurance coverage on the rise

The private sector is continuing to pick up the slack created by provincial cutbacks, as more and more Canadians begin turning to extended private coverage that reimburses them for noninsured hospital and medical expenses. Data from the Canadian Life and Health Insurance Association (CLHIA) indicate that 20.3 million Canadians had extended coverage at the end of 1995, a 3% increase over the previous year and a 57% jump during the past decade.

Private insurance typically covers the cost of private hospital rooms, special duty nursing, paramedical services and vision care. As provincial governments delist or deinsure certain services, the private sector has increasingly been moving to fill the void. CLHIA points to the redesign of health insurance for travellers as an

example. Dental insurance rates remained stable in 1995, with about 13.2 million Canadians covered. However, the number of Canadians with disability insurance fell by 643 000 from the previous year, to 7.1 million. The drop probably reflects layoffs and the growing popularity of contract work, which provides no benefits such as disability insurance. CLHIA said Canadians spent \$7.3 billion on private health insurance in 1995.

MR certification introduced in Canada

The Canadian Association of Medical Radiation Technologists (CAMRT) recently conducted the first examination for its new magnetic-resonance (MR) specialty certificate. Although a relatively new technology, this type of imaging is already firmly rooted in clinical practice and has expanded into specialized applications such as spectroscopy, functional imaging and angiography. About 50 MR units currently operate in hospitals across Canada.

The certification, which follows basic training, was developed in response to the rapid development of MRI and its growing use in Canada, primarily by radiologists and medical-radiation technologists. The certifying body, CAMRT, is a partner in the CMA's conjoint-accreditation process.

Medical charity welcomes support

PANACEA, the International Society for Better Vision, is looking for volunteers, donors, helpers and contacts to assist its charitable projects in India. Retired ophthalmologist Michael Priest of New Westminster, BC, says the Canadian registered charity provides medical services to needy children in India; these range from ocular exams to hand surgery to



overcome deformities caused by leprosy. Priest, PANACEA's president, welcomes both financial help and the

professional support of physicians interested in short-term relief work in India. Inquiries should be sent to

PANACEA, 203-60 Richmond St., New Westminster, BC V3L 5R7; 604 540-8464 (phone and fax).

Research Update • Mise à jour de la recherche

Catching a culprit in the act

Two rabbits with atherosclerosis have provided the first direct evidence that a common bacterial infection is a major culprit in heart disease. In a study published in the *Journal of Clinical Microbiology* (1997;35[1]:48-52), researchers at St. Michael's Hospital in Toronto, the University of Toronto and McMaster University in Hamilton, Ont., showed that a human isolate of *Chlamydia pneumoniae* caused atherosclerotic plaques to form in the aortas of some infected rabbits. Of 11 rabbits infected, one had a fatty streak and evidence of *C. pneumoniae* in the aorta and another had a grade III atherosclerotic lesion, from which *C. pneumoniae* was cultured. There was no atherosclerosis in a group of control rabbits.

Finding 2 rabbits with heart disease may not sound like a groundbreaking result, but it provides a key

piece of the puzzle surrounding the pathogenic basis for atherosclerosis.

"This was just a pilot study," explains Dr. Bill Fong, but he and his associates, Dr. Brian Chiu, Esther Vira, Michael Fong, Dan Jang and Dr. James Mahony, have since confirmed these results in a larger rabbit study, as yet unpublished. "The difference [between infected and control groups] was highly significant, so we're very confident about our results."

Using a human isolate of a microorganism to reproduce a disease in an animal and subsequently recovering the organism from the experimental disease are crucial steps in establishing that an organism causes a particular disease, according to the Henle-Koch postulates.

C. pneumoniae, first described 12 years ago as a cause of community-acquired pneumonia, is a very common infection from childhood on-

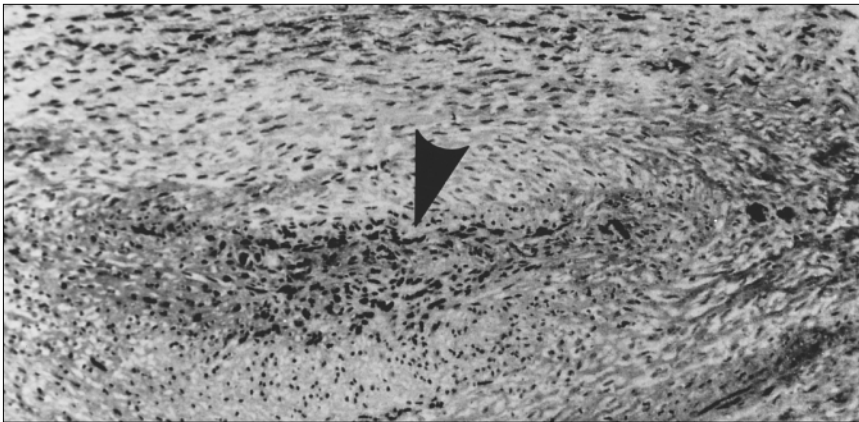
ward. In addition to pneumonia, it may cause sinusitis, bronchitis and cold-like symptoms. Fong estimates that 60% to 80% of adults have antibodies to the bacterium. Seroprevalence studies have linked previous infection with a risk of atherosclerosis. In previous studies, the organism has been isolated from plaques in an average of 45% to 50% of patients with atherosclerosis. Fong says his group has found the organism in the plaques of up to 70% of such patients.

"*Chlamydia pneumoniae* probably plays an important role in atherosclerosis. We think that the disease is multifactorial. Infection and lifestyle factors may act together consecutively or sequentially. The infection may cause damage to the blood vessel, and then lifestyle factors may contribute to more mature atherosclerosis."

The researchers are planning studies in which infected and uninfected rabbits will be fed foods with cholesterol levels comparable to the human diet.

Fong says he and his colleagues are "very close" to a clinical application for their research. There are plans to try to reverse the disease with antibiotic therapy in animals and then in humans. Fong is concerned that antibiotics may not do much good once the infection has damaged blood vessels. More promising is a possible vaccine. Animal studies have indicated that natural infection is not completely protective, but multiple-dose vaccination may provide continuing protection in humans. — C.J. Brown

American Society for Microbiology



The smoking gun: grade III atherosclerotic lesion in the aorta of a rabbit. Avidin-Biotin immunohistochemical stain with *Chlamydia Cel Pn*. Hematoxylin counterstained; arrow shows positive result in nodule of vascular smooth-muscle cells. Original magnification 100 ×.