

WHO Task Force to Study Mild Brain Injury

CANADIAN CHIROPRACTOR LEADS TEAM TO REVIEW AND CONDUCT RESEARCH

Editorial Staff

A team of scientists from the University of Saskatchewan's Institute for Health and Outcomes Research (IHOR), in conjunction with the World Health Organization's Collaborating Centre for Neurotrauma at the Karolinska Institute in Stockholm, Sweden, have begun an international study on mild brain injury (MBI). Over the next four years, the team will complete a systematic review of the world literature pertaining to mild brain injury, conduct and complete original research on traumatic brain injuries in Sweden and Canada, and create WHO guidelines on the risk, prevention, diagnosis and treatment of mild brain injuries.

Heading up this study will be David Cassidy, DC, PhD, IHOR's director of research and a 1975 graduate of Canadian Memorial Chiropractic College. "There are literally tens of thousands of articles that we need to review to identify what percentage is scientifically admissible," said Dr. Cassidy. "We intend to produce guidelines for the diagnosis and treatment of MBI."

Other researchers include Dr. Linda Carroll, a clinical health psychologist, and Dr. Paul Peloso, a clinical epidemiologist and rheumatologist, who with Dr. Cassidy will comprise the scientific secretariat of the WHO task force. The task force also includes Dr. Ake Nygren, an epidemiologist who heads the section for personal injury prevention at the Karolinska Institute, as well as a number of brain injury experts from around the world.

The \$2.1 million study is being funded primarily by a pair of automobile insurance companies in British Columbia and Quebec, and by the Saskatchewan Government Insurance (SGI). Additional funds are being provided by the WHO Collaborating Centre in Sweden, and a partnership of Swedish insurance companies. The final report of the task force will be distributed by the WHO and published in a scientific journal.

The ABCs of MBI

Mild brain injuries, more commonly known as concussions, affect an average of one in 500 people. Approximately half of all mild brain injury cases are caused by traffic accidents. They can also be caused by a fall or an injury suffered during a sporting event.

MBI is characterized by symptoms such as fatigue, headaches and dizziness. Behavioral conditions arising from MBI can include problems with one's memory and concentration, difficulty learning new information, difficulty with reasoning and slowed reaction time.

"You also sometimes get difficulty with executive functions like making decisions, planning," said Dr. Carroll. "You can also get emotional changes such as increased irritability, decreased frustration tolerance."

"It's difficult at times to diagnose and we don't know much about some of the long-term symptoms," added Dr. Cassidy. "Another issue is the actual pathological mechanism for MBI. There's controversy about that, too. There's one school of thought that this can occur without any actual impact to the head. "It truly is a global problem and that's why the WHO is interested."

While the WHO certainly has a vested interest in the outcome of the study, so do the insurance companies, who are of course interested in the costs involved with treating MBI. Based on the average of between 130-200 people per 100,000 suffering a mild brain injury, SGI estimates that it costs Saskatchewan up to \$3.5 million a year in medical, rehabilitation and other expenses. Those kinds of costs can add up quickly given the tens of thousands of MBI cases that occur worldwide each year, and the insurance companies want definitive answers about this condition.

"The insurance industry is interested in knowing more about (MBI), how to properly manage it, what sort of resources they should put toward it and what sort of preventive interventions might be useful," Dr. Cassidy said.

"More people are aware of the MBI diagnosis right now. Some people, including insurance companies, are having trouble with the diagnosis because it's so subjective. Hopefully, our task force will clarify the issue."

Teaming up and Getting down to Work

It was Dr. Cassidy's work as a visiting professor at the Karolinska Institute and his relationship with Dr. Ake Nygren (himself a visiting professor to the University of Saskatchewan) that touched off the partnership between the university and the World Health Organization. Dr. Cassidy worked in Dr. Nygren's section while in Sweden. "Our connection with professor Nygren and Karolinska Institute has opened doors to the WHO," said Dr. Cassidy. "I think it brings prestige to the university, because I know the end product of this four years will be guidelines on how to manage mild brain injury and they will be widely disseminated by the World Health Organization."

Dr. Cassidy added: "There will be the stamp of Karolinska Institute in Stockholm, which is one of the biggest medical universities in the world and one of the most prestigious. And right beside it will be the stamp of the University of Saskatchewan."

Numerous original studies will be carried out in Saskatchewan and Sweden during the duration of the project. The Institute for Health and Outcomes Research has studied every person involved in a Saskatchewan traffic accident for the past 18 months, including those with MBI. In addition, the team is planning three studies in Sweden, including examinations of the records of all MBI patient admissions to the Karolinska Institute and to all Swedish hospitals.

The third study may be a population-based mail survey of patients with head injuries. "People in Sweden are much more conscientious in answering surveys than they are here," noted Dr. Cassidy. The survey return rate in Sweden is between 85-90%, compared with only 50-60% in Saskatchewan. "Once the study is complete, we hope to make recommendations to health practitioners about the proper diagnosis and treatment of mild brain injuries."

One of the goals of the task force is to come up with better defined guidelines for the diagnosis and treatment of mild brain injury. Current guidelines for the treatment of MBI do exist, but "but they vary in their rigor of development," said Dr. Cassidy. "I've seen guidelines that have been developed after a

weekend meeting. These guidelines will be developed after reviewing 20,000 articles."

"Evidence-based guidelines are important tools to aid clinicians dealing with difficult clinical problems," said epidemiologist Peloso. "There is a staggering amount of literature on the subject, but only a portion of it will be scientifically admissible."

"Standards of care vary tremendously because of uncertainty about the best approach, and the task force will serve as a good starting point by defining our baseline of knowledge," added health clinical psychologist Carroll.

That Dr. Cassidy is leading this study into mild brain injury is yet another indication of the kinds of progress chiropractors have made over the years. From advanced degrees and improved educational standards to taking the lead in international research projects, the chiropractic profession continues to make inroads toward acceptance in the fields of health care and scientific study.

References

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