

## LIMITATIONS OF THE QUEBEC TASK FORCE ON WHIPLASH ASSOCIATED DISORDERS

Robert W. Teasell MD FRCPC  
Associate Professor of Medicine  
University of Western Ontario  
London Health Sciences Centre, University Campus  
London, Ontario Canada

### SUMMARY

**Cohort Study:** This study was to show the natural history of whiplash injuries. However, the high recovery rates reported were not consistent with the best three studies which focused on symptom recovery. The low percentage of claims relative to other Canadian jurisdictions utilizing a tort system raises concerns that Quebec may have simply had a "high threshold" for continuing claims of disability. Valid conclusions about natural history are difficult to make. GRADE: D

**Best Evidence Synthesis Including Interventions:** This was the primary reason for the study. Excellent analysis which identified the paucity of conclusive research regarding treatments for whiplash. This study provides the best evidence-based summary yet of whiplash treatments. However, the paucity of research allows a limited number of conclusions, either positive or negative ("absence of proof in not proof of absence"). GRADE: A

**Consensus Recommendations:** Despite a recognized lack of good research a consensus report, focusing on interventions, was made. Consensus reports of this type are of limited value and are of concern with the QTF because of: (1) limited evidence supporting the consensus; (2) the consensus clinicians not internationally well recognized; (3) partisan funding; (4) potential for abuse of guidelines. The guidelines do appear to make sense but remain somewhat vague and are of limited use in chronic whiplash. GRADE: C +

OVERALL GRADE: B

## THE QUEBEC TASK FORCE

In 1990, the Societe d'Assurance Automobile du Quebec (SAAQ), a provincial government no-fault insurance carrier in Canada's second largest province, commissioned a group of clinicians, scientists and epidemiologists to exhaustively review the scientific literature and make public policy recommendations regarding the prevention and treatment of whiplash and its associated disorders. The stated reasons for commissioning this study reflected a grievous concern with both the magnitude of the problem of WADs and the paucity of strategies to effectively address it: **"The frequency of the clinical entity labelled as whiplash is high; the residual disability of victims appears significant in magnitude, and the costs of care and indemnity are high and rising. There is considerable inconsistency about diagnostic criteria, indications for therapeutic intervention, rehabilitation and the appropriate role of clinicians at all phases of the syndrome. Little is known about primary prevention of the condition, and virtually nothing is known about tertiary prevention of serious disability"** (Quebec Task Force 1995). The Quebec Task Force Study on Whiplash Associated Disorders concluded that the scientific evidence regarding whiplash was **"sparse and generally of unacceptable quality"** and they were forced to rely on consensus opinion for treatment recommendations. Despite its limitations this report remains the best and most comprehensive review of management of whiplash to date.

## THE COHORT STUDY

It is difficult to be definitive regarding the natural history of whiplash as there is a paucity of longitudinal studies in anything but selected populations, ea., individuals who attend specialist's office or who seek attention in a local emergency room. Defining recovery can be problematic. As part of the Quebec Task Force Study (1995) a cohort of 4,757 subjects who submitted claims in 1987 to the Quebec provincial (single-payer) insurance plan were reviewed. A significant number were excluded because of lack of police collision reports (1,745) and because of a previous injury in another MVA (204). This left 2,810 patients. Cumulative "recovery" rates were 22.1 % within 1 week, 53% within 4 weeks, 64% within 60 days, 87% by 6 months and 97% by one year.

In this cohort of patients compensated for whiplash injuries the median time to recovery (end of disability compensation) was 31 days. It is not clear whether patients had actually returned to work (or usual activities) or were simply deemed able to do so by the insuring agency (SAAQ). There was no indication whether patients suffered residual pain or disability. Interestingly only 19 of the total 4,757 whiplash claimants, or 0.4%, were assigned to a rehabilitation program by the SAAQ. It is of note that the percentage of motor vehicle claims paid out for whiplash under the Quebec no-fault system appears to be only a fraction of that paid out by Canadian provinces with a tort system (Quebec Task Force 1995). Accordingly, the high recovery rates in the Quebec Task Force cohort may simply reflect a higher "threshold" for allowing continued claims of disability.

Compare this to three of the best (albeit still flawed) studies looking at consecutive patients seen in an emergency room, through family doctor referrals and an acute orthopedic practice.

Gargan and Bannister (1994) studied 50 consecutive patients with soft tissue neck injuries attending an emergency room within 5 days of the accident. At three months 15 patients were asymptomatic. Of these 14 (93%) were still asymptomatic at two years. 35 patients were symptomatic after 3 months; of these 30 (86%) remained symptomatic after 2 years. After one year, 26 of the 50 (52%) reported they had recovered completely but only 19 (38%) at 2 years.

Radanov et al. (1994) studied 117 patients referred by primary care physicians with a diagnosis of whiplash. Patients were referred specifically for the study which limited selection bias. Initial assessment was conducted on average at 7 days post injury. 51 (44%), 36 (31 %) and 28 (24%) of patients were symptomatic at 3, 6 and 12 months respectively

Hildingsson and Toolanen (1990) prospectively studied 93 consecutive cases referred acutely to an orthopedic department because of a "noncontact injury to the cervical spine resulting from car accidents." At follow-up an average 2 years after the accident, 42% recovered completely, 15% had minor discomfort, and 43% had discomfort sufficient to interfere with their capacity to work.

Since these are regarded as three of the best longitudinal studies it raises concerns about the applicability of the cohort study, in essence its validity, to actual whiplash recovery. Surprisingly the QTF regarded the cohort study as more indicative of outcome and based upon the cohort findings concluded "WAD are usually self-limited." GRADE: D

#### BEST EVIDENCE SYNTHESIS/REVIEW OF INTERVENTIONS

A best evidence synthesis was put together to examine risk factors, diagnosis, interventions and prognostic factors. Specific interventions were the major part of this analysis. However, for almost every treatment the Task Force found either no studies or lack of independent studies, ie. the specific intervention was only included in multi-modal studies or in conditions other than whiplash. Only facet joint injections, pulsed electromagnetic treatment and magnetic necklace were found to be of no benefit in acceptable clinical trials and even these conclusions were based on only one study for each treatment.

Table 1 lists conclusions for each treatment; note the most common conclusion is "no studies." Therefore, based on a best-evidence synthesis, for the vast majority of treatments we cannot definitively conclude whether they are effective or ineffective, just that they have not been studied in isolation. However, the multimodal interventions have not suggested that they would be effective. The major message of the Quebec Task Force on WAD is that current scientific evidence on whiplash treatment is, at worst deeply flawed, and at best lacking. It concludes the various modes of interventions must be investigated in a scientific manner.

Despite the obvious lack of scientific evidence for whiplash treatments, there is often an assumption that lack of proof equals lack of efficacy. For most treatments in WADs we don't have the proof yet to support whatever opinions we may hold although the trend of evidence does not support most interventions. GRADE: A

**Table 1. Specific Interventions for WAD**  
**Immobilization**

Soft Collars	Oniv studied in control groups. May delay recovery by promoting inactivity (3).
Rest	No studies. Prolonged rest likely detrimental to recovery.
Cervical pi flows	No studies.

**Activation**

Manipulation	No acceptable studies establishing short-term or long term effectiveness.
Mobilization	No studies. Likely beneficial over short-term. Long term benefit not established.
Exercise	Not independently studied. As part of a "multimodal intervention" may be beneficial.
Traction	Not independently studied. No benefit demonstrated.
Postural Advice	Not independently studied.
Spray and Stretch	No studies.

**Passive Modalities and Electrotherapies**

TENS No studies.

Pulsed Electromagnetic Rx No benefit (1 )

Electrical Stimulation	No studies.
Ultrasound	No studies.
Laser, Heat, Ice, Massage	No studies.
<b>Surgery</b>	No studies.

**Injections**

Nerve Block	No studies.
Epidural Injections	No studies.
Facet Joint Injection	No benefit (1).

<b>Pharmacological Interventions</b>	No studies
<b>Psychological Rxs.</b>	No studies.

**Other Interventions**

Prescribed Function	improved outcome in one study.
Acupuncture	No studies.
Magnetic Necklace	No benefit (1).

## CONSENSUS GUIDELINES

The committee noted, **"the systematic review of the original research literature yielded little scientifically rigorous information addressing the mandate to the Task Force by the SAAQ."** The consensus recommendations were **"based on the best evidence available, or where evidence was lacking, on the combined experience and judgement emerging from extended in-depth discussions of the Task Force Members."** The Task Force then noted that they **"put forward some controversial courses of action in the belief that public debate would be of value."** It was also stressed that these, **"recommendations reflect the consensus of the Task Force that the prognosis of WAD can be altered by optimum management."**

The danger of consensus guidelines provided within the context of lime scientific evidence is that they give the impression of being built upon a foundation of scientific truth or facts. This is particularly true of the QTF because the consensus guidelines/recommendations accompany an impressive best evidence synthesis of interventions. Even more worrisome is the partisan funding; in essence the insurer, hardly a disinterested party, is paying the bill for consensus development. Finally, the clinicians providing the consensus treatment were as a rule not internationally well-known in contrast to other guideline committees, ie. IASP committees, raising further concerns, especially in light of the previously discussed funding source.

Consensus guidelines are only as good as the individuals providing the consensus guidelines, hopefully without bias, and the evidence upon which the guidelines are based. Because bias is a concern and the evidence upon which the consensus was formulated is considered sparse, the consensus guidelines must be viewed with a certain degree of healthy skepticism. Some bias was declared by the QFT. **"The philosophy of the Task Force in evaluating treatment was one of prudence in the absence of evidence. We required that any therapeutic intervention should do more e should not medicalize a condition or reinforce disability behaviour".**

Based upon anecdotal experience, the consensus guidelines appear to make sense. However, they are somewhat vague which may be indicative of the lack of hard data. There is always the risk that vague guidelines may be abused. As well the guidelines don't adequately address the issue of chronic WAD, in either its treatment or prevention. GRADE C,

## CONCLUSIONS

The Quebec Task Force is useful in that it: (1) highlights paucity of good scientific evidence; (2) provides an excellent review of scientific evidence, sparse as it is; (3) provides consensus guidelines which are not unreasonable. Limitations include: (1 ) conclusions drawn from flawed cohort study; (2) implication that treatments are ineffective when no studies have been done; (3) consensus guidelines are unproven and suspect; (4) doesn't deal with the issue of chronic whiplash pain and tends to imply psychogenesis.

The Back Letter (1996) in discussing the QTF guidelines noted that, **"Like other guidelines, this report was a somewhat uncomfortable melding of "scientific evidence" from flawed studies and ~consensus" findings by the panel in the absence of definitive scientific evidence."**

## **FUTURE DIRECTIONS**

There is clear need to test interventions in properly randomized, controlled~studies; however, this is often difficult because of the frequent use of multiple treatment modalities with whiplash patients. Alternatively, one could study the consensus guidelines, recognizing their vagueness, in a large randomized controlled study.

## **REFERENCES**

The Back Lener 1996; 11(3):34.

Gargan ME, Bannister GC. The rate of recovery following whiplash injury. Eruop. Spine J 1994; 3:162-164.

Hildingsson C, Toolanen G. Outcome after soft tissue injury of the cervical spine. Acta Orthop Scan 1 990; 61 :3 5 7-3 5 9.

Spitzer WO, et al. Quebec Task Force on Whiplash-Associated Disorders. Spine 1995; 20(8S):1S-73S.

Radanov BP, Sturzenegger M, DeStefano G. Schnidrig A. Relationship between early somatic, radiological, cognitive and psychosocial findings and outcome during a one-year follow-up in 1 17 patients suffering from common whiplash. Br J Rheumatology 1994; 33:442-448.