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### URGENT PORTABLE HEAD COMPUTED TOMOGRAPHY

Wainwright Health Centre, in Wainwright, Alta., is the first facility staffed by rural family physicians to use the CereTom (NeuroLogica Corp), a portable head computed tomography (CT) scanner. Following the introduction published in *CJRM*,<sup>1</sup> this letter summarizes our first 12 months using the CereTom for urgent CT, excluding urgent CT for stroke and transient ischemic attack (TIA). The initial results for stroke and TIA were published by Shuaib and colleagues.<sup>2</sup>

We performed 51 urgent scans in 50 patients (27 female and 23 male); an 80-year-old man underwent 2 scans. Four youths (8%; 1 female and 3 male), aged 11–17 years, underwent scans following head trauma (not surprisingly, due to certain sports and activities, such as cycling without a helmet, especially among the males!). Twenty-eight patients (56%) were aged 18–65 years and 18 patients (36%) were over 65 years of age.

We had a medical staff of 8 family physicians: 5 doctors ordered 6–8 scans each. One doctor ordered 11 scans, and the remaining 2 doctors ordered 1 scan each. This works out to a moderate average of 1 urgent non-stroke and non-TIA scan per physician every 2 months.

Four patients underwent scans ordered by external physi-

cians. A patient even came from Lethbridge, Alta. (about 900 km round-trip) because Wainwright had the *only* CT scanner in the province that could scan a patient who weighed 490 lb.

Reasons for scanning included

- 18 instances of trauma and/or concussion;
- 17 new neurologic issues (e.g., seizures, unexplained loss of consciousness);
- 9 instances of late TIA/stroke (beyond protocol time limits);
- 6 instances of acute headache.

A summary of the CT reports and management follows:

- reports noted 21 scans (about 40%) showing some abnormality, most frequently “cerebral atrophy” or “old stroke”;
- 4 patients (about 8%) were recommended to undergo follow-up magnetic resonance imaging;
- 3 cases (about 6%) were discussed with specialists by telephone;
- 2 patients (about 4%) were referred out immediately: 1 for repair of facial fractures and 1 with obtundation and a complex neurologic history;
- 30 scans (about 60%) were “normal.”

This review has improved our radiology department’s documentation before imaging, because of the 4 women under 30 years of age who underwent scanning, only 1 had a note in her chart that she was not pregnant.

In their initial report of 18 patients under the Northern Alberta Telestroke Program, Shuaib and colleagues found that 17 received adequate care at Wainwright Health Centre without the need for transfer. The authors stated,

Before the availability of the portable scanner, all 18 patients would have required transfer ... at a greater cost to the health care system.<sup>2</sup>

The case report noted in my introductory article<sup>1</sup> showed that early transfer as a direct result of prompt CT diagnosis has given an occasional patient a good outcome after surgery.

This summary shows that most of our nonstroke, non-TIA patients undergoing urgent CT were safely assessed and received treatment locally after a portable head CT scan. One can imagine the enormous cost and time savings if this machine were used in very remote centres.

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### REFERENCES

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2. Shuaib A, Khan K, Whittaker T, et al. Introduction of portable computed tomography scanners, in the treatment of acute stroke patients via telemedicine in remote communities. *Int J Stroke* 2010; 5:62-6.