FIGURE Photographie montrant la cassure du pacemaker au niveau du boîtier

d'un dysfonctionnement secondaire à un accident de la voie publique sans section décelable des électrodes.

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Sedation for MRI scans in children

To the Editor:

The concept of nurses giving sedation to pediatric patients for MRI scans causes me great concern for the safety of the patients and especially in Canada, for the efficient use of MRI scan time.

Beebe *et al.* took great care to train the nurses involved and experience improved the performance of everyone involved. However, their average sedation time of 69 ± 32 min for scans of 20 to 30 min, and their recovery times of 60+ min would be problematic in our institution. Supervision by a radiologist gives me cause for concern, because they are not likely to be accustomed to airway management in emergency situations as can occur in the MRI setting. I believe that it is important that anesthesiologists must not abrogate their responsibilities to patients, even when it appears that nurses might do the job in the majority of situations.

I have been giving anesthetics to patients for MRI scans one day per week since 1991 and have anesthetized about 5000 patients in that time using propofol. My median sedation time is 34 min, with a median recovery time of 25 min. I have had two failures, both in patients in whom I could not establish an *iv*. Airway management is the major challenge; most patients are managed with optimal head and neck positioning, but some require oropharyngeal airways, some require laryngeal masks and, a very few require tracheal intubation. None have required neuromuscular blocking agents.

Patients requiring sedation or anesthesia for MRI scans should be treated by an anesthesiologist who should decide upon the appropriate technique.

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REPLY:

Dr. Harrison and his colleagues perform sedation for MRI in pediatric patients using intravenous propofol. He reports very few failures and much more rapid recovery (25 min) than we obtained using our protocol (69 min). He also states that he and his colleagues are better able to provide airway management, if the need arises, than nurses or radiologists.

I agree that propofol, administered by an anesthesiologist, will result in quicker recovery and discharge than most sedation protocols. Most protocols, like ours, primarily use barbiturates or chloral hydrate. Unfortunately, most institutions do not have enough anesthesia personnel or resources to administer propofol and/or other sedative or general anesthetics to every child requiring sedation for MRI. Propofol administration can result in apnea relatively rapidly and, in my opinion, requires an anesthesiologist to be present. In contrast, the agents in most sedation protocols have a more gradual onset, and have a long safety record when administered by nurses.^{1,2}

I believe that there must be a good relationship and good communication between the nurses, radiologists, and anesthesiologists for a nurse administered sedation program to be effective and safe. An anesthesiologist should be quickly available should problems arise. This is not a problem at our institution where the MRI suite is two floors below the operating theatre. However in places where the MRI is several blocks away or in another building, an anesthesiologist must be present on the site regardless of who actually administers the sedation or what drugs are utilized.

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References

- 1 Beebe DS, Tran P, Bragg M, Stillman A, Truwitt C, Belani KG. Trained nurses can provide safe and effective sedation for MRI in pediatric patients. *Can J Anesth* 2000; 47: 205–10.
- 2 Sury MR, Hatch DJ, Deeley T, Dicks-Mireaux C, Chong WK. Development of a nurse-led sedation service for paediatric magnetic resonance imaging. *Lancet* 1999; 353: 1667–71.

REPLY:

I would like to thank Drs. Harrison and Sullivan for their comments. The editorial aim was to evoke the response "Houston we have a problem". With Pandora's Box open, parents and patients expectations now are to have a pain free and anxiety free experience within our institution. This has caused a major manpower shift with the re-allocation of resources from within to out of operating room service. Hope remains within the Box, although Nietzsche felt this was the cruelest trick played on us. At least we should address the problem.

Dr. Sullivan asks the question "is this manpower issue just a bleb and should we just muddle through?" I believe that we are only seeing the tip of the iceberg - that the problem will get worse. This is due to government cut backs in residency and medical school positions causing our numbers to remain low. Secondly due to the devastating removal of the rotating internship and the need of potential physicians having to choose their career in 2nd year medical school, our profession has lost major exposure. Thirdly, the ability of cross-pollination from other residencies and the return of general practitioners who were often our finest candidates, have been obstructed by limited residency positions.

The other half of the coin, delineation of responsibility, we keep coming up with the fortress mentality with the standard replies, keep the portcullis tightly shut, keep it shut but send out an exploration team and maybe the

problem will go away. And lastly, very rarely done in Canada, let's open the gate and constructively see what's out there.

So in conclusion we either as a collective stay within the castle and petition now strongly the Royal College of Physician and Surgeons and the Government to change the system so we can recover quickly over five to ten years or we should look at dedicated medical assistants. This problem is not going to go away unless action is taken.

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