

## CORRESPONDENCE

Anesthesiology  
1996; 85:223  
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## The Shaw Hemostatic Scalpel as an Alternative to Electrocautery in Patients with Pacemakers

*To the Editor:*—It is well known that intraoperative use of electrocautery can potentially affect implanted pulse generators in one of several ways.<sup>1</sup> Inappropriate inhibition or triggering of pacer output during cautery commonly occurs as a result of sensing electromagnetic interference, and is most troublesome in pacemaker-dependent patients. Cautery also may induce transient asynchronous pacing because of reversion to the “noise mode,” or reprogramming to the “back-up mode,” which necessitates resetting the device. Destruction of pacemaker circuitry with loss of pacemaker function, conduction of electrical impulses with resultant increases in pacing thresholds, myocardial thermal burns or initiation of ventricular fibrillation,<sup>2</sup> and the induction of a “runaway pacemaker”<sup>3</sup> all were reported. We would like to alert anesthesiologists to another available device used to promote surgical hemostasis and to prevent such interference.

A 65-yr-old woman with a right thyroid nodule was scheduled for a right thyroid lobectomy at our institution. The patient had a permanent pacemaker inserted 6 months before this admission for bradycardia and near syncope. The pacemaker was a dual chamber Pacesetter 2028L generator (Sylmar, CA), with bipolar leads in the right atrium and ventricle. Because of the proximity of the surgical field to the pacemaker (<6 in), we were concerned about electrocautery interference. The manufacturer was contacted for technical advice on this particular device and advised us not to apply a magnet during electrocautery use.

In addition, the surgeon was ready to use bipolar cautery and suggested that the surgery could be accomplished with the aid of the Shaw Hemostatic Scalpel (Hemostatix Medical Devices, Cherry Hill, New Jersey (Fig. 1). At our request, on the morning of surgery, a representative of the Pacesetter company was available, with a device-specific program systems analyzer at our operating room, to help, in case electrocautery was used and the pacemaker required reprogramming. The planned procedure was carried out successfully with the Shaw Scalpel, without difficulty or interference with pacemaker function, and no further follow-up was required.

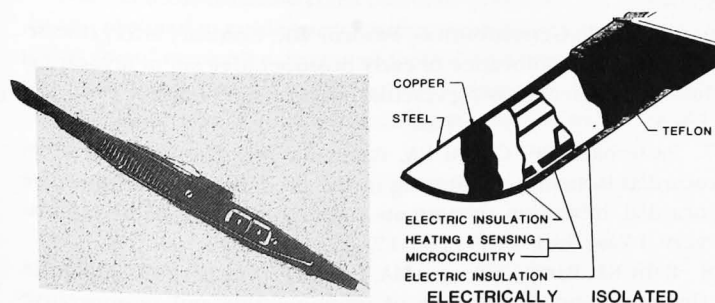


Fig. 1. The Shaw Hemostatic Scalpel and structure.

The successful use of the Shaw Scalpel was described in adults and children undergoing a variety of operative procedures.<sup>4-6</sup> The Shaw Scalpel was particularly useful in patients with pacemakers that required replacement of pacemaker batteries.<sup>7</sup> This scalpel works by thermally transferring heat to the tissue, and is electrically insulated from the patient by a Teflon coating (Fig. 1). This is an obvious advantage of the Shaw Scalpel over conventional electrocautery in patients with pacemakers. We believe that anesthesiologists aware of this option can prevent serious intraoperative pacemaker malfunction due to electrocautery in select cases where the Shaw Scalpel is available and the surgical site is in close proximity to the pulse generator.

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(Accepted for publication April 8, 1996.)