

Letters to the Editor

Wound Complications and Treatment of the Infected Implantable Cardioverter Defibrillator Generator

To the Editor:

I read with great interest the article by Gupta and colleagues entitled "Wound complications and treatment of the infected implantable cardioverter defibrillator generator" (*J Card Surg* 1993;8:671-677). As the authors report, placing the ICD generator in a subcutaneous pocket resulted in a 4.1% wound complication rate in their series. They are to be congratulated on their ability to salvage 11 of 17 generators with a rectus abdominis muscle flap.

However, I would like to submit that primary placement of the generator in a subrectus pocket posterior to the rectus abdominis and anterior to the posterior rectus fascia, would result in a wound complication and generator erosion rate of an even lower amount. As pointed out by Damiano,¹ no generator pocket infectious complications were seen in a series of over 100 consecutive cases in which the generator was implanted beneath the rectus muscle. Further, the only erosion seen was in one patient in whom the device was positioned above the rectus fascia in the subcutaneous position.

The rectus sheath is easily entered via a left subcostal incision and a subrectus pocket is readily able to be developed beneath the rectus muscle via this incision. Additionally, this approach requires only a single incision in those patients undergoing implantation of the device via a subcostal thoracotomy approach.

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REFERENCE

1. Damiano RJ: Implantable cardioverter defibrillators: Current status and future direction. *J Card Surg* 1992;7:36-57.

Reply to the Editor:

Thank you very much for the opportunity to

respond to the letter of Dr. Greenfield, who commented on our article entitled "Wound complications and treatment of the infected implantable cardioverter defibrillator generator" (*J Card Surg* 1993;8:671-677). Dr. Greenfield points out that in an article by Damiano,¹ in a small series of 100 consecutive ICD generators placed in a subrectus pocket, there was no incidence of infection. I agree with Dr. Greenfield that Dr. Damiano is to be congratulated on his series, which certainly compares favorably to other published infection rates in the literature (0% to 5%). However, there are reports in the literature of series of ICDs placed in subcutaneous pockets without any infections.²

Furthermore, there are certain advantages of the standard method of subcutaneous ICD insertion, which continues to be the procedure of choice for the vast majority of ICD generator implantations. These include ease and speed of insertion, and the ability to interrogate and program the ICD. There also have been reports of catastrophic migration of the ICD generator into the peritoneum, when placed in the subrectus position.³ Finally, subrectus pocket infections have been reported following the placements of ICDs and pacemakers.³ If a subrectus pocket infection develops, these patients who have primary subrectus ICD placement must have the ICD moved to another site, as opposed to utilizing the same site and ipsilateral rectus muscle for coverage. We continue to feel that meticulous sterile surgical technique is very important for the prevention of wound complications and infections in the placement of ICDs and pacemakers. We present our series as a method of treatment when these unfortunate complications do occur. Once again, we thank Dr. Greenfield for his interest in our article and appreciate his input.

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REFERENCES

1. Damiano RJ: Implantable cardioverter defibrillators: Current status and future direction. *J Card*