Abdominal skeletal muscle twitching due to current leak from a pacemaker extension connector box

A 51-year-old gentleman with tetralogy of Fallot underwent pulmonary valve replacement and tricuspid valve annuloplasty necessitating endocardial pacing system extraction so that the annuloplasty ring could be sited. During the same operation, an epicardial pacing system was implanted with the generator positioned subcutaneously in an epigastric position.

Six months later, the box was moved to the left iliac fossa because of pocket pain and a Medtronic extension connector box was used to extend the lead so that it could be implanted in a subrectus position. Several months later, the patient presented with intermittent skeletal muscle twitching in the abdomen. Lead impedance had fallen from 746 to 562 Ohms suggestive of a current leak. A radio-opaque marker was placed over the site of maximal twitching on abdominal x-ray (figure 1) which appeared to overly a lead fracture and so the patient was admitted electively for surgical exploration. During the operation, no fracture could be identified but rather the large screws used to secure the existing lead to the connector box were exposed resulting in a current leak. Figure 2 shows the surgeon placing medical insulating glue over the bare screws which caused the current leak.

Figure 1 A radio-opaque marker was placed over the site of maximal abdominal twitching and appeared to overly a lead fracture.

Figure 2 Surgeons place medical insulating glue over the bare screws which caused the current leak.
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