**SINGLE SITE PERFORMANCE OF THE ST. JUDE RIATA 1581 LEAD:**

**AN INCREASED FAILURE RATE**

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Introduction: St. Jude Medical estimates a 0.63% incidence for all cause abrasion in Riata leads. Insulation breach with conductor wire exposure has been reported in several case reports and is believed to be underestimated.

Objective: This study sought to determine the incidence of St. Jude Riata 1581 failure at the University of Mississippi Medical Center (UMMC). Failure included insulation breach with exposure of the conductor wire and noise leading to inappropriate shocks. Methods: Forty two Riata 1581 leads were implanted at UMMC. Six leads failed with noise leading to inappropriate shocks or insulation damage with conductor wire exposure. A seventh case referred to UMMC had noise with inappropriate shocks.

Results: Six of 42 Riata 1581 implants at UMMC failed, revealing a 14% failure rate from October 2003 to November 2011. Five cases had noise leading to inappropriate shocks with radiographic evidence of insulation damage with an exposed conductor wire. The sixth case had exposure of the conductor wire at the generator change. In one case, radiographic abnormalities were detected 9 months prior to presentation. In a second case, radiographic abnormalities were noted one year prior to lead noise. In 6 of 7 cases, no impedance abnormalities were noted prior to shock.

Conclusions: The incidence of failure of the St. Jude Riata 1581 at our single site is 14%. This is significantly higher than previously reported estimates. Radiographic abnormalities precede inappropriate shocks and impedance abnormalities rarely occur. Further studies are needed to determine the proper management of patients with these leads.