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Letter to the Editor

Reply to: 'Bystander hit by leakage current from S-ICD'

Dear Editor,

We thank Dr Peran and his colleagues for submitting very important details of a rescuer inadvertently shocked by a subcutaneous ICD (S-ICD) whilst performing chest compressions[1] and their support of our recommendations arising from our recent study.[2] It is a particularly significant case report in that we believe it is the first ever report of a rescuer receiving a shock from a S-ICD during CPR.

Our measurement of surface current during S-ICD discharge and estimation of leakage current suggested a significant risk to the rescuer because the current is several orders of magnitude above the recommended safe threshold. This case report is consistent with our predictions and demonstrates that there is a real and significant risk to the rescuer from S-ICD discharge; more so that the risk resulting from conventional transvenous-ICD discharge.

With increasing numbers of S-ICDs being implanted, we believe that this is only the first of many incidents where the rescuer may come to harm and is likely to represent a challenge in the management of cardiac arrest in S-ICD patients. It is a particular worry that S-ICDs appear to be susceptible to being triggered by CPR due to oversensing[1,3] which may increase the risk to the rescuer further. Further case reports are to be encouraged in order to quantify the incidence and severity of this problem, which is likely to require addressing by S-ICD manufacturers.

REFERENCES

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