

## Hazards of monopolar diathermy plate in Surgery

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*Respected Madam*, I would like to draw attention to the hazard of severe skin burns from using the monopolar diathermy plate electrode during surgical procedures. Diathermy operates in two modes. In the monopolar mode, current enters the patient's body through an active electrode and exits via a grounding pad attached to the patient.<sup>1</sup>

During a recent total abdominal hysterectomy with bilateral salpingo-oophorectomy of a 30-year-old lady with a complex mass, the grounding pad for the electro-cautery had been applied to the left foot, which was found to have third degree burns after completion of the procedure. Similarly, an elderly diabetic lady presented to our outpatient department with the history of a 32 days old non-healing lesion on her left thigh and a Pfannenstiel incision on her abdomen. She had undergone a complete abdominal hysterectomy in another health care centre. During the surgery, the grounding pad was placed on her left thigh which suffered partial thickness burns. According to the patient's history, the lesion was coin sized at the beginning, but due to poor glycemic control, it continued to involve the surrounding healthy tissue, including the bone. She had previously undergone multiple debridements for the lesion and was advised hip disarticulation after a thorough assessment by the senior management at our department. Even though the procedure was carried out, she, unfortunately, could not survive a few days following the disarticulation.

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The reason for the burns was loose application of the grounding pad to the skin of the patient resulting in heat generation and sparking at the site preventing the current to pass safely causing skin burns. To prevent this, the grounding pad should be firmly applied to the skin preferably with crepe bandage. Some other ways to help prevent such complications are adhesive grounding pads and utilization of diathermy machine alarm system.<sup>1</sup> Surgical briefing with the entire perioperative team is necessary so that each individual understands their role in preventing electrosurgical hazards.<sup>2</sup> In addition to this, case reporting of surgical burns to the national database is necessary for implementation of such preventive measures.<sup>3</sup>

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