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**Original article**

**Millimeter Wave Therapy for Abdominal Incision Wound- A Clinical Study**

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**Millimeter Wave Therapy for Cesarean Incision Wound- A Clinical Study**

**ABSTRACT**

This case-control study, conducted in 2012, was performed to determine if millimeter wave therapy (MMWT), a non invasive therapeutic treatment modality, could reduce postoperative pain and infection in patients who had cesarean sections. The study group (30 patients) incision sites were exposed to MMWT within 24 hour of cesarean and the control group (90 patients) was not exposed to MMWT. Millimeter wave apparatus with intensity of 38 GHz **and power flux output density of 40 mW/cm2 was** used for subjecting the cesarean incision site to MMWT. The first exposure to MMWT was done for 30 minutes within 24 hour of cesarean section. In total, they were exposed for 30 minutes daily for 3 days. Wound healing was assessed every day. Pain intensity score in the exposure group reduced significantly compared to the control group. The mean pain intensity score of the study group on the 3rd postoperative day was 3.3±1.8 (95% CI 2.6-3.9) compared to 4.2±1.6 (95% CI 3.8-4.5) of the control group (P< 0.01). Pain reduction rate on day 3 was significantly higher than day 1 in the study group compared to the control group (P = 0.0024). Routine white blood cell (WBC) count was significantly lower in the MMWT treated patients (11.3±1.8×109; 95% CI 10.6-12) compared to the control group (12.3±2.9×109; 95% CI 11.7-12.9) (P<0.03). Wound exudation, erythema and incision site infection was reduced in the study group. The results of our study verified that MMWT can relieve post operative pain, decrease post operative morbidities and enhance early mobilization, and can serve as an alternative tool to suppress pain and cure infection.

**Key words:** Cesarean Section; Millimeter Wave Therapy; Pain Relief; Wound infection