

## Determination of CO<sub>2</sub> Laser Output Power for Skin Incision in Dogs

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**Purpose:** The objectives of this study were to determine output power for skin incision in 0.3mm spot diameter CO<sub>2</sub> laser by measuring (1) the wound depth, (2) initial dermal tissue damage, (3) degree of wound healing at different power(4W, 5W and 6W) in Beagle dogs.

**Material and Methods:** Three healthy 2 year old Beagle dogs were used. Four 2 cm straight skin incisions were made with 0.3mm spot diameter CO<sub>2</sub> laser on the each dog's both side of dorsal midline in three Beagle dogs. The skin were incised for 10~15 second for same dosage. And then each wound was closed with two surgical stapler. At 0, 3, 7 and 14 days after initial wounding, each wound was taken for histological observation.

**Results:** On macroscopic and microscopic observation, initial incisional wound did not show difference in three group. And also re-epithelialization, dermal tissue damage and inflammatory response did not show significant difference among the groups.

**Conclusion:** This study reveals that 4W, 5W and 6W may be suitable output power in 0.3mm spot diameter CO<sub>2</sub> laser for the skin incision in Beagle dogs.

**Key words:** CO<sub>2</sub> laser, output power, skin incision, dog

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