Treatment of cervical dentin abrasion hypersensitivity by Diode laser and glass ionomer cement

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PURPOSE

The aim of this study was to evaluate the effectiveness of Diode laser combined with glass ionomer cement in the treatment of cervical dentin abrasion hypersensitivity.

MATERIALS AND METHODS

Sixty medically healthy patients with 120 cervical dentin abrasion hypersensitive teeth were included in this study. All patients had at least one cervical dentin abrasion hypersensitive teeth in either upper or lower arch. Through a randomized double-blind placebo controlled trial, Group A was treated by Diode laser. Group B was treated by glass ionomer cement. Group C was treated by Diode laser combined with glass ionomer cement. Group D received no treatment as a control. The energy output of Diode laser was 1 W at 20 pulse/second for 2 min.

RESULTS

The result indicated that Diode laser and glass ionomer cement can reduce the cervical dentin abrasion hypersensitivity by 63% and 72% respectively. The effectiveness of Diode laser combined with glass ionomer cement in the treatment of cervical dentin abrasion hypersensitivity is 93% with a statistically significant difference ($p < 0.01$). No adverse events were observed in any cases.

CONCLUSION

Diode laser combined with glass ionomer cement is a useful method in the treatment of dentin hypersensitivity.