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**EFFECT OF LOW-LEVEL LASER THERAPY IN THE TREATMENT OF BURNING MOUTH SYNDROME: A SYSTEMATIC REVIEW AND META-ANALYSIS**

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**Background and aims:** low level laser therapy (LLLT) has been used in the treatment of burning mouth syndrome (BMS) for recent years and the role of intervention has not proven accurately. We conducted a systematic review and meta-analysis to investigate the efficacy of low level laser therapy (LLLT) in the treatment of burning mouth syndrome (BMS).

**Methods:** We performed a search on PubMed, Embase, Scopus and Web of Science for relevant studies that met our eligibility criteria. English language restriction included and only randomized clinical trials on humans entered to this study.

**Data extraction:** 63 Records identified through database searching and also 1 Additional records identified by hand-searching. After removing duplicates and studies not meeting inclusion criteria like case reports and animal studies, at last 9 Full-text articles assessed for eligibility. Quality assessment of this study was executed by using the Critical Appraisal Skills

Programme (CASP). Eventually 7 of these studies were selected for meta-analysis by Comprehensive meta-analysis version 2.

**Results:** From Total of 9 studies 7 randomized controlled trials (RCTs) studies including BMS patients were selected. Our results shows us LLLT can relieve the sensation of mouth .WMD in visual analog scale (VAS) pain outcome score after treatment was significantly lower in the experimental groups compared with control groups (WMD=-11.42 [95% CI= -16.82, -9.72], I(2) =0%).

**Conclusion:** low level laser therapy is an effective therapeutic intervention in reduction of the symptoms of burning mouth syndrome.