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**Title:** New Horizon in Vital Pulp Therapy

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**Abstract:**

Aim and background: Direct pulp capping is coverage of exposed pulp by a biocompatible material. The purpose of this procedure is to seal this spot against bacterial leakage, stimulate dentinal barrier formation, and maintain the vitality of the pulp. The aim of this study is to make a critical review of published articles about common methods of pulp capping and introducing new methods.

Content: The direct pulp cap, in which a material is placed directly over the exposed pulp tissue, has been suggested as a way to promote pulp healing and generate reparative dentin. Success of this procedure precludes the need for more invasive, more extensive and more expensive treatment. Previous Studies show bacterial and toxicity of materials damage the pulp. Therefore, sealing ability and material toxicity are important factors in the prognosis of pulpal response to vital pulp therapy. A number of materials have been suggested to use in pulp capping: Glass Ionomer /Resin-Modified Glass Ionomer, Adhesive Systems, Calcium Hydroxide, MTA.

The classical recommendations for successful indirect and direct pulp capping do not provide clear and uniform indications about the type of anesthesia, technique of non-traumatic way of preparing the dentin, yet. The current review summarizes the laser energy applications and stresses on the benefits as the lack of vibration and heating, no need of anesthesia, and the bacteriostatic and healing laser effect.

**Conclusion:** Er:YAG laser assisted biological treatment of the pulp provides better prospects than the conventional therapy with rotary instruments and pulp capping materials.

**Key words:** laser, pulp cap, biologic treatment of the pulp

**Presentation:** Poster