Direct Pulp Capping with Calcium Hydroxide or Mineral Trioxide Aggregate: A Meta-Analysis

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**Aim**
- To compare the effectiveness of MTA and calcium hydroxide on direct pulp capping in humans in terms of success rate, inflammatory response and dentin bridge formation.

**Materials & Methods**
- A literature search was performed with multiple electronic databases from 2003-2014.
- Inclusion criteria included:
  1. Randomized controlled trials (RCT’s) or retrospective nonrandomized trials (RNT’s).
  2. Direct pulp capping performed on human permanent teeth in vivo.
  3. Studies comparing MTA versus calcium hydroxide.

**Results**
- 13 studies were included for analysis.
- MTA showed a significantly higher success rate, higher percentage of calcified dentin bridge formation and less inflammation compared with Ca(OH)₂

**Conclusion**
- MTA has a higher success rate and results in less pulpal inflammation and more predictable dentin bridge formation than calcium hydroxide when used as a pulp capping material.

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