**Participant flow**

Screened teeth: 120 primary molars

Excluded: 76 primary molar

Allocated: 44 primary molars

**Group B Calcium Hydroxide n= 22 molar**

**Group A 3Mix-MP n= 22 molar**

n=22

no sign or symptoms

**3 months**

n=20

1 molar with sign and symptoms and 1 missing restoration

n=17

4 molar with sign and symptoms and 1 missing restoration

**6 months**

n=16

3 molar with sign and symptoms

and 1 missing restoration

n=17

no sign or symptoms

**9 months**

n=12

2 molar with sign and symptoms

and 1 missing restoration

n=17 successful

**12 months**

n=12 successful

**Baseline characteristics**

|  |  |  |  |
| --- | --- | --- | --- |
| characteristic |  | Group A: 3Mix-MP | Group B: Calcium Hydroxide |
| Patients (n) |  | 22 | 22 |
| Mean age, y(SD) |  | 8.8 (1.4) | 8.3 (1.5) |
| Gender, n (%) | male | 15 (48.4) | 16 (51.6) |
| female | 7 (53.8) | 6 (46.2) |
| Exposure diameter | ≤ 1 mm | 10 | 10 |
| > 1 mm | 12 | 12 |
| Exposure location | axial | 17 | 15 |
| occlusal | 5 | 7 |
| The number of filling surfaces | 1 | 1 | 2 |
| 2 | 18 | 12 |
| 3 | 3 | 6 |
| 4 | 0 | 2 |

Outcome measures:

The data was analyzed using two methods

Intention to treat analysis: ITT- analysisPer- Protocol analysis: PP- analysis

**Primary outcome**

The primary outcome was the clinical success rate of the materials, with treatment considered to be a success if there were no clinical signs\symptoms at the 3, 6, 9 and 12 months post-treatment.

The number of clinically successful cases.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| PP- analysis | | ITT- analysis | |  |
| Group B  (Calcium Hydroxide) | Group A  (3Mix-MP) | Group B  (Calcium Hydroxide) | Group A  (3Mix-MP) |  |
| 21 | 18 | 22 | 22 | Total |
| 21 | 17 | 22 | 20 | 3 months |
| 19 | 14 | 19 | 16 | 6 months |
| 19 | 12 | 19 | 12 | 9 months |
| 17 | 12 | 17 | 12 | 12 months |

**Secondary outcome**

The secondary outcome was the radiographic success rate of the materials, with treatment considered to be a success if there were no radiographic signs\symptoms at the 6 and 12 months post-treatment.

The number of radiographically successful cases.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| PP- analysis | | ITT- analysis | |  |
| Group B  (Calcium Hydroxide) | Group A  (3Mix-MP) | Group B  (Calcium Hydroxide) | Group A  (3Mix-MP) |  |
| 21 | 18 | 22 | 22 | Total |
| 17 | 14 | 17 | 16 | 6 months |
| 17 | 12 | 17 | 12 | 12 months |

The overall success rates (clinically and radiographically) according to ITT- analysis.

|  |  |  |
| --- | --- | --- |
| ITT- analysis | | |
| Group B (Calcium Hydroxide) n (%) | Group A (3Mix-MP)  n (%) |  |
| 22 (100) | 22 (100) | Total |
| 22 (100) | 20 (90.9) | 3 months |
| 17 (77.3) | 16 (72.7) | 6 months |
| 17 (77.3) | 12 (54.5) | 9 months |
| 17 (77.3) | 12 (54.5) | 12 months |

The overall success rates (clinically and radiographically) according to PP analysis.

|  |  |  |
| --- | --- | --- |
| PP- analysis | | |
| Group B (Calcium Hydroxide) n (%) | Group A (3Mix-MP)  n (%) |  |
| 21 (100) | 18 (100) | Total |
| 21 (100) | 17 (94.9) | 3 months |
| 17 (81) | 14 (77.8) | 6 months |
| 17 (81) | 12 (66.7) | 9 months |
| 17 (81) | 12 (66.7) | 12 months |

**Additional variables:**

**The impact of exposure diameter, exposure site and the extent of the restoration on the success rate:**

1. **The diameter of the exposure** was estimated on the images using Imagej software (version1.31) (<http://imagej.nih.gov/ij/>)

The exposures were classified according to their diameter into two categories:

• Smaller or equal to 1 mm (≤1 mm)

• Greater than 1 mm (> 1 mm).

1. **The exposure site** was classified into two categories: occlusal exposures and axial exposures.
2. **The number of filling surfaces** ranged between 1 and 4 surfaces.

The number of successful cases in terms of to exposure diameter, exposure site and the extent of the restoration on the success rate) according to PP analysis.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | Group A  (3Mix-MP) | Group B  (Calcium Hydroxide) | count |
| n | n | n/total |
| **Exposure site** | axial | 8 | 12 | 20/27 |
| occlusal | 4 | 5 | 9/12 |
| **Exposure diameter** | ≤1mm | 5 | 7 | 12/17 |
| >1mm | 7 | 10 | 17/22 |
| **The number of filling surfaces** | 1 | 1 | 2 | 3/3 |
| 2 | 10 | 9 | 19/26 |
| 3 | 1 | 4 | 5/8 |
| 4 | 0 | 2 | 2/2 |

**Adverse events:**

Losing the filling was observed in 5 cases and the reason is unknown. These cases couldn't be refilled because they showed failure signs.

The number of lost composite fillings in each group**.**

|  |  |  |  |
| --- | --- | --- | --- |
|  | Group A (3Mix-MP) | Group B (Calcium Hydroxide) | total |
| **lost composite fillings** | 4 | 1 | 5 |