

EVALUATION OF SILICONE-COATED DRESSINGS IN PEDIATRIC SURGICAL WOUND MANAGEMENT

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Purpose This study aimed to compare the clinical performance of silicone-coated dressings (Cosmopor Silicone) versus traditional medical adhesive dressings (Cosmopor E Steril) in pediatric surgical patients

Children undergoing postoperative care following laparoscopic appendectomy (n=100)

Dressing changes: once daily x 7 days

Group I: (n=50)

Silicone-based wound dressings (Cosmopor/Omnifix)

Group II: (n=50)

Medical adhesive dressings (Cosmopor E Sterile)

Inclusion Criteria:

- Aged 5-17 years
- Underwent laparoscopic appendectomy

Exclusion Criteria:

- Complicated appendicitis
- Intraoperative change of diagnosis
- Active chronic/allergic skin disease

Assessment Algorithm

- Skin condition assessment after each dressing change
- Assessment of the skin at the dressing removal sites and areas between the dressing removal sites

Mathematical Model

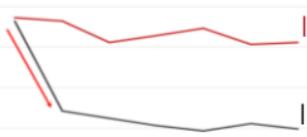
Sum of the dressing removal points + Sum of the lengths between the removal points

RESULTS

Incidence of skin damage following dressing changes

POD	Group I	Group II
1	0 (0%)	3 (6%)
2	0 (0%)	5 (10%)
3	0 (0%)	9 (18%)
4	0 (0%)	9 (18%)
5	1 (2%)	14 (28%)
6	2 (4%)	17 (34%)
7	2 (4%)	18 (36%)

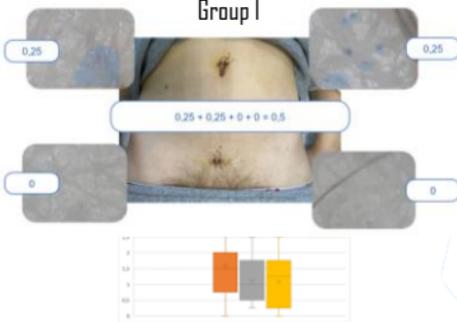
Pre-dressing anxiety assessment



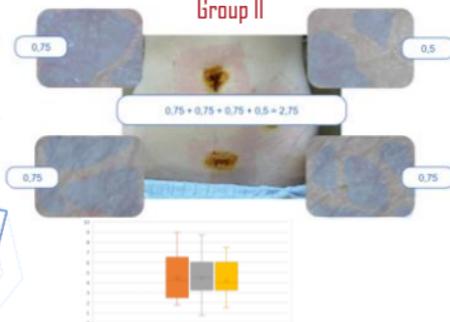
Pain intensity during dressing change in pediatric patients

POD	Group I	Group II
1	2,42 ± 1,20	6,66 ± 0,87
2	1,88 ± 0,69	6,66 ± 1,29
3	1,78 ± 0,58	6,34 ± 1,62
4	1,88 ± 0,48	5,90 ± 1,49
5	1,22 ± 0,42	5,84 ± 1,52
6	1,40 ± 0,49	5,52 ± 1,52
7	1,54 ± 0,50	5,54 ± 1,45

Group I



Group II



Conclusion Silicone-coated dressings (Cosmopor Silicone) significantly reduced peri-wound skin trauma, attenuated pain (by 72%), and minimized anticipatory anxiety during dressing changes. These findings support their preferential use in pediatric surgical care to enhance patient comfort and wound outcomes.