

Spotlight on Research: Massage Effective in Treating Young Children's Skin Conditions

By Michael Devitt

Editor's note: This periodic column keeps you abreast of the latest research documenting the benefits of massage and bodywork. Published research is summarized, with references to the full study text provided; abstracts of research projects planned or in progress are reproduced verbatim whenever possible. This month we look at the effectiveness of massage in treating young children's skin conditions.

Burns and eczema are among the most common pediatric skin conditions experienced in the United States. The National Institute of Arthritis and Musculoskeletal and Skin Diseases (NIAMS) estimates that up to 20 percent of all infants and young children suffer from eczema at any given time. While much less common, pediatric burns often are just as painful and, by some accounts, even more stressful; the procedures associated with changing burn dressings can be particularly traumatizing, and might cause anxiety in both children and their parents.

It is well-known that skin conditions such as eczema and burns can be stressful and harmful to children. It's also well-known that while these conditions usually are treated with medications or other standard procedures, a variety of alternative therapies also might be used to treat them, with outcomes similar, if not superior, to traditional care. In a recent issue of *Dermatologic Clinics*, researchers from Florida examined the use of massage in two studies on pediatric burns and atopic dermatitis. The studies, published as a single article, suggest massage can play a significant role in the treatment of both conditions, and can be a useful complement to standard methods of care.

Massage for Burns

In the first study, 24 children (average age 29.3 months) admitted to a burn unit at a large university hospital were randomized to either a massage therapy group or a control group. All of the children were scheduled to have the dressings on an existing burned changed. Approximately 30 minutes prior to dressing change, 23 of the children were administered an analgesic to help relieve pain.

In the control group, a massage therapist spent 15 minutes with the children prior to dressing change, sitting next to the child's bed and talking with the child. In the massage group, the children received a 15-minute massage from a trained therapist, with strokes applied to areas of the child's body that were not burned, using moderate pressure.

Dressings were changed by nurses unaware of which group each child had been assigned to. To determine incidence of pain between groups, an observer (also unaware of each child's group assignment) recorded a series of six "distress behaviors" in the children just prior to, and during, the dressing change.

Children given a massage before the dressing change "showed only an increase in torso movements" while their dressing was changed. The nurses "also reported less difficulty conducting the procedure" on children who had been massaged prior to dressing change.

In contrast, children who did not receive a massage showed increases in all of the other distress behaviors.

The authors concluded that children who had received a massage prior to dressing change "showed minimal distress behaviors and no increase in movement other than torso movement." They suggested future studies examine the effectiveness of teaching parents to perform massages on their children before burn care procedures, which could help to reduce the stress levels of all involved.

Massage for Atopic Dermatitis

In the second study, scientists recruited 20 children ages 2 to 8, all of whom had been diagnosed with atopic dermatitis, a type of eczema that causes severe itching and a red, raised rash on the skin. The children were randomized into two groups: half received "standard care" (consisting of emollients and topical corticosteroids) from a dermatologist, while the other half received standard care along with a daily massage.

In the massage therapy group, massages were performed by the children's parents. During the first session, a therapist gave the parents a 20-minute massage to familiarize them with massage techniques and how the

massage felt. The therapist then demonstrated the same massage techniques on the child. At the end of the first session, the parents were given a videotape and a written description of the massage to take home and review.

The massage consisted of two standardized phases. First, the child was placed in a supine position, with the dermatitis medication applied as a moisturizer to ensure smooth stroking movements. Next, five regions of the child's body (face, chest, stomach, legs and arms) were massaged in sequence, with different techniques performed on different parts of the body. Any severely affected, sensitive areas of the body were avoided. Massages were administered daily for one month, with each massage lasting 20 minutes.

Regions of the Child's Body Massaged in Sequence

Face

- Strokes along both sides of the face.
- Flats of fingers across the forehead.
- Circular strokes over the temples and the hinge of the jaw.
- Flat finger strokes over the nose, cheeks, jaw, and chin.

Chest

- Strokes on both sides of the chest with the flats of the fingers, going from midline outward.
- Cross-strokes on sides of the chest going over the shoulders.
- Strokes on sides of the chest toward the shoulder.

Stomach

- Hand-over-hand strokes in a paddlewheel fashion, avoiding the ribs and the tip of the rib cage.
- Circular motion with fingers in a clockwise direction starting at the appendix.

Legs

- Strokes from hip to foot.
- Gently squeeze and twist in a wringing motion from hip to foot.
- Massage foot and toes.
- Stretch the Achilles tendon.

- Gently stroke the legs upward toward the heart.

Arms

- Strokes from the shoulder to the hand.
- Same procedure as for the legs.

When compared to the standard care group, children receiving a daily massage showed a "statistically significant improvement" in a variety of symptoms associated with atopic dermatitis over the length of the study period. The only factor both groups showed similar improvements in was scaling.

The daily massage protocol appeared to have a positive affect on both parents and children. Parents who administered massages to their children, for example, showed decreased anxiety levels after the first massage session and by the last day of treatment, and reported their own feelings about their children "improved." Receiving massages had a likewise effect on the children, whose anxiety and activity levels improved throughout the course of care.

| First day vs. last day dermatitis assessments, massage and control groups* | | | | |
|---|----------------------|-----------------|----------------------|-----------------|
| | Massage Group | | Control Group | |
| Focal area | First day | Last day | First day | Last day |
| Redness | 2.1 | 1.4 | 1.5 | 1.4 |
| Lichenification | 1.8 | 0.9 | 1.7 | 1.7 |
| Scaling | 1.3 | 0.6 | 1.9 | 1.4 |
| Excoriation | 1.7 | 0.6 | 1.5 | 1.1 |
| Pruritus | 1.9 | 1.5 | 1.5 | 1.7 |

* Assessments conducted on a scale of 0 to 3; lower score is optimal for all measures.

While the length of the study was rather brief, the researchers suggested continued massage likely would have improved the children’s condition even further, and at worst would have maintained the improvements seen during the initial one-month treatment session.

"Although this study did not assess the long-term effects of the massage intervention, it is hypothesized that the observed improvement in the children’s condition would stabilize or continue to improve if the parents continued to administer the massage protocol," they wrote. They added that parental massage "is a very cost-effective adjunct therapy" to standard care for atopic dermatitis, costing an average of \$30 for patient.

References

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