

BACKGROUND

Mirror therapy (MT) is a type of motor imagery whereby the patient moves his unaffected limb while watching the movement in a mirror; this in turn sends a visual stimulus to the brain to promote movement in the affected limb.

- **MIRROR THERAPY** has been utilized by Occupational Therapists as an adjunct to therapy and one of the pain management strategies.
- **Mirror therapy** is often used for amputees, stroke patient, and complex hand traumas in their rehabilitation
- In collaboration with our PICU medical team, MT has been an ongoing project in addressing and managing pain and delirium in the ICU

PURPOSE

Provide a multi modal holistic approach in addressing pain in our pediatric population

METHODS

OCCUPATIONAL THERAPY

Pediatric **Occupational Therapist** initiates, incorporates MT in the Occupational Therapy treatment session. OT evaluates and initiates the MT with the pediatric patients, sets program and monitors program first 3-5 sessions. Creates a program and schedule based on the OT evaluation; Session of 5 days /wk 15 -30 min session.

Patients who received MT:

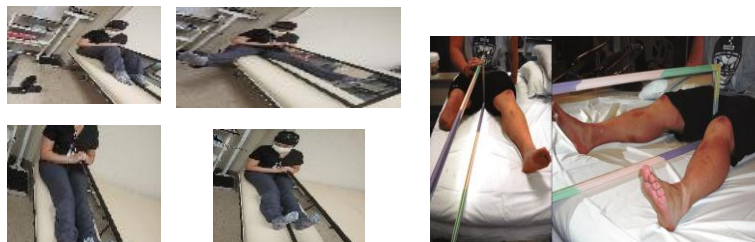
1. Amputee LLE secondary to MVC
2. Amputee UE secondary to MVC
3. Complex hand pain s/p s/p secondary to trauma

All three patients were older than 12 years old; program is designed with the child in mind, based on the OT evaluation and child's tolerance.

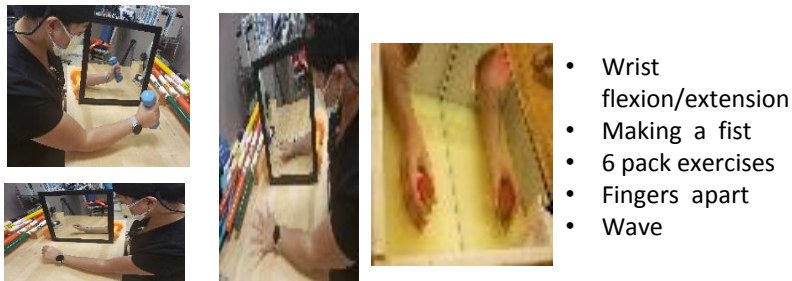
OT program will consist of the following:

BLE: Mirror between the legs with the affected, amputated leg is visually obscured.

- Perform warm up; jiggle the legs (1-2 min)
- Initiate with movements that are innately bilateral
- Ankle pumps DF/PF 3-5 min
- Knee flexion/extension



BUE:



- Wrist flexion/extension
- Making a fist
- 6 pack exercises
- Fingers apart
- Wave

Child Life Specialists

- Conducts initial developmental/ psychosocial assessment of patient
- Medical understanding of hospitalization and plan of care
- Non-pharmacological pain management education and implementation
- Emotional support, validation, education and implementation of safe emotional expressive outlets
- Body image; normalization/ acceptance following amputation
- Creation of individualized daily schedule; identifying and encouraging individualized participation of care
- Provide therapeutic insight of evaluation and feedback from patient throughout hospitalization to healthcare team

RESULTS

- Improving range of motion of the upper extremity
- Improves functional independence
- Reduces phantom limb pain
- Reduces the need for pain medicines after amputation
- Decreases stress and improves quality of life

Collaboration with child life ensures carry over and consistency for daily implementation

Research has shown:

- Research has shown that 78% of amputee's report experience phantom limb pain
- Of that, 93% reported MT was effective in reducing phantom limb pain

CONCLUSIONS

There is a current need to incorporate **mirror therapy (MT)** as an additional modality in rehabilitation.

Our hope is that this will encourage understanding of the role that **Occupational Therapy and Child Life Specialists can play in provision of alternatives to pain management.**

Early Physician recognition is important for initiation of referrals. MT can prove to be a cost effective, easily accessible therapy intervention.

Patient engagement and participation is key in the overall success of MT

Encourages multidisciplinary collaboration in care and improves overall patient and family centered care

REFERENCES

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- [4] Collins, K. L., Russell, H. G., et. Al. (2018). The Journal of clinical investigation, 128(6), 2168–2176.

