

THE USE OF HYDROTHERAPY IN THE TREATMENT OF EPIDERMOLYSIS BULLOSA

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PHYSIOTHERAPY TREATMENT CHALLENGES

- EB presentation.
- Physiotherapy is a '*hands on*' profession.
- EB is a '*hands off*' condition.
- Need for effective therapy.
- Benefits of immersion and exercise.
- Hydrotherapy offers exclusive differences from land-based exercise.
- Total body treatment.
- SO MUCH MORE THAN JUST SWIMMING



BENEFITS OF HYDROTHERAPY

- Hydrotherapy success.
- National specialist centre for paediatric EB.
- Little in medical literature regarding the use and efficacy of this therapy.
- Three year retrospective hydrotherapy service review.
- Aim to show it is a safe ,reliable and effective treatment for this patient group.

POOL ENVIRONMENT

- Clean ,safe, environment.
- Dolphin device, ozonator, chlorine.
- Pool tested as per standards of the Pool Water Treatment Advisory Group.
- Average temperature is 34-36°C
- Pool entry –via stairs/hoist.
- Dressings remain in situ in the water
- Soft floatation aids.
- Solo use of the pool at the end of a session allows pool filter system to clear any skin or stray dressings.

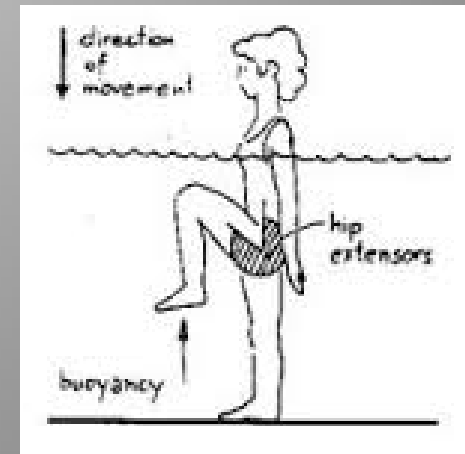
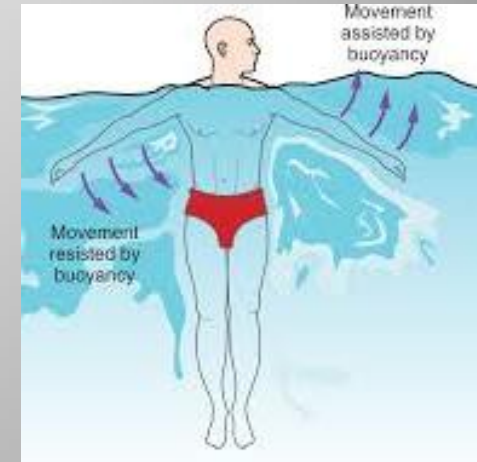


Utilising the properties of water for effective treatment in EB

- Treatment developed from a basis of hydrodynamic theory.
- Specific properties of water can be utilised -heat, buoyancy turbulence, cohesion, friction and viscosity etc.

Specific treatment techniques utilising the properties of water - BOUYANCY

- Buoyancy: upward force a fluid exerts on an object, less dense than itself.
- Support - move parallel to the surface of the water.
- Assist - move with the up thrust effect.
- Resist - move against the up thrust effect
- Mobilising and Strengthening
 - Increase speed
 - Increase resistance by adding floatation
 - Hold a static posture against buoyancy
 - Increase length of lever



Specific treatment techniques utilising the properties of water - TURBULANCE

- Resistance to movement provided by;
 - Viscosity (friction)
 - Weight and density of water
- Move towards the surface of the water at a speed greater than the effect of buoyancy
- Sweeping movement fast under the water
- The bigger and faster the movements the harder the exercise.

Specific treatment techniques utilising the properties of water – RELIEF OF BODY WEIGHT

- Water will support the body during gait Re-education.
- PWB effect
- Better posture
- Confidence
- Sense of freedom
- Independence
- Progress by running – increase the resistance

Specific treatment techniques utilising the properties of water – EASE OF POSITIONING

Specific treatment techniques utilising the properties of water -RELAXATION

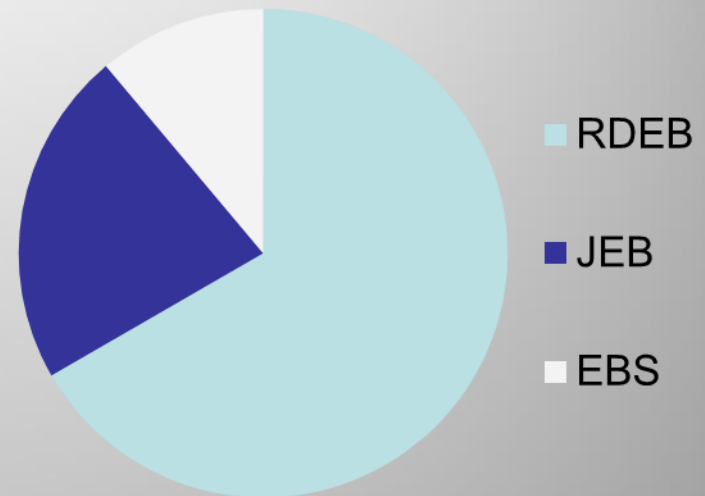
- Warmth of water.
- Promotes muscle relaxation.
- Reduced effect of gravity.
- Support of the joints.
- General feeling of well being
- For some patients may be the only environment in which they can experience new postures or move independently.

Treatment success using properties of water –
GAINING RANGE AND IMPROVING FUNCTION

FUN

RESULTS

- Over 3 years : 21 treatment episodes. 9 patients, range of EB subtype.
- Small numbers - tertiary nature of the caseload.
- Logistically difficult with only one dedicated EB therapist
- No reported skin infections or issues with pool environment secondary to skin shedding.
- Very popular with patients and parents, high satisfaction levels.
- Demonstrated improvement range of movement, muscle strength and confidence in walking.
- Occasional complaint of stinging sensation when entering pool
- One reported episode -new blisters on the trunk.
- Group sessions



CONCLUSION

- Hydrotherapy is a safe and effective treatment environment.
 - Very well tolerated.
 - Utilising the principles of water can make treatment much more effective than on dry land.
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- A hydrotherapy pool is a proven safe therapeutic environment for EB patients. Families should be empowered with knowledge and confidence and therefore feel able to access local pools.
 - This promotes social inclusion and where possible enables patients and their families to live as ordinary a life as possible

THANK YOU

EB team at Great Ormond Street Hospital