



Vigorous Massage in a Young Infant: Cause of Dangerous Outcome

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Abstract

Massaging in infancy is a type of complementary treatment practising globally. It has so many scientifically proven benefits. Research in preterm and Low birth weight babies has found that massage therapy helps in gaining weight, increases bone mass density, reduces cortisol, may shorten hospital stay. Also studies shows that it increases bonding between baby and parents if done by them. However, massage therapy may be injurious to the delicate infants if not done properly.

We report a 1^{1/2} month baby who admitted and evaluated for excessive cry and diagnosed as bilateral femur fracture following massage therapy.

Keywords: *Massage therapy, infancy, weight gain, bonding, fracture*

Introduction

Massaging in infancy is a traditional practice since a long time. Infant massage was first introduced in China in 2nd century BC. Oil Massaging has been a tradition in India and other Asian countries since time immemorial⁽¹⁾. It has so many proven benefits. It can be beneficial by thermoregulation, local absorption of oil, tactile kinesthetic stimulation. However it may sometimes cause adverse effects like bacterial colonization, skin rashes even dangerous complication like fracture.

Case Report

A 1^{1/2} month infant was brought with complaints of excessive cry for 2 days. There was no history of fever, cough, cold, loose motion, vaccination, convulsion, ear discharge etc. He was a term, 1st order baby, born by normal vaginal delivery. Born out of non consanguineous marriage. Exclusively

breast feeding since 1/2hr of life. On examination-vital was stable, There was no pallor, icterus, cyanosis. Chest was clear bilaterally. No Bleeding spots, echymotic patches, bruises or bite mark was present. But there was definite tender swelling of thigh bilaterally with palpable crepitus with paucity of movement which was unnoticed by mother. There was no history of recent vaccination or any bone disorder in the family. On asking mother accepted that swelling was not there previously. On leading question mother told there was history of massage followed by excessive cry. Immediately X Ray was done and diagnosis was confirmed. Other routine investigation was done including serum calcium (10.8mg/dl) which was within normal limit. Orthopedic consultation done. Bilateral thigh Brace was given by them and discharged with syp. Paracetamol and vitamin D3.



Discussion

Topical oil massage is done by many countries including India. Coconut oil massage has advantage over mineral oils. The practice of oil massage has gained favour in neonatal care units in the developed countries as well⁽²⁾. Topical oil application has been shown to improve skin barrier function, thermoregulation and also suggested positive effect on growth^(3,4). Oil prevents insensible water loss from the skin and helps in temperature maintenance⁽¹⁰⁻¹²⁾. Absorption of fat through the thin and more vascular skin of preterm has also been suggested⁽¹³⁾. Moreover, a number of studies have also demonstrated superior growth and development in preterm infants receiving tactile kinesthetic stimulation^(5 9). Oil application may occasionally cause adverse effects in the form of skin rashes and greater propensity of bacterial colonization⁽²⁾. Mathai, *et*

al⁽⁵⁾ have shown better neurobehavioural outcome after tactile kinesthetic stimulation with oil. However oil massaging develops better bonding if done by parents. If not it is better to be done by a trained person. Otherwise it may cause harm to the baby like our case. Sowmya SG, *et al* reported a 15 days old male neonate having right proximal radius and ulna fracture following vigorous massage⁽¹⁴⁾.

Fracture in newborn can have many reasons like Birth Injury, Osteogenesis Imperfecta, Child Abuse. In our case absence of family history and no other bone involvement made Osteogenesis Imperfecta and Child Abuse less likely. There was no history of fall and also fall do not result in this type of fracture.

Conclusion

Oil massage has so many benefits both for baby and parents. Coconut oil has benefit over mineral oil. However, it should be done gently. Otherwise vigorous and forceful massage can lead to long bone fracture. Such Bilateral fracture femur following massage is a rare entity, thus it is reported.

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