



Case Report:

Vigorous Oil Massage in a Neonate: Cause for Fracture

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Abstract: Massaging the newborn has been a tradition in India and other Asian countries since time immemorial. There are many benefits of traditional oil massage. Although considered as a safe practice with no significant harmful effects, rarely if performed improperly baby may end up having adverse effects like fracture. We report a forearm fracture in a neonate following vigorous oil massage. A 15 days old male baby was brought with the complaints of reduced movement, pain and swelling in right forearm of one day duration. The baby was born full term to a non consanguineous parent. His birth weight was 3.12kg and APGAR score was good. Post natal period was uneventful except for neonatal hyperbilirubinemia for which he had received phototherapy. At home he was getting daily oil massage and bath by traditional techniques. On examination there was diffuse, tender swelling on the ventral aspect of right forearm which was firm in consistency and there was paucity of movement. X ray revealed fracture of proximal radius and middle third of ulna. Skeletal survey did not reveal any other fracture. Baby was treated with a short arm, below the elbow cast. Absence of family history and no other bone involvement made osteogenesis imperfecta and child abuse less likely. In conclusion simple causes like oil massage also to be kept in mind in dealing with neonatal fractures.

Key Words: Fracture; Newborn; Oil massage

Introduction:

Infant massage was first introduced in China in 2nd century BC. Massaging the newborn with oil has been a tradition in India and other Asian countries since time immemorial.[1] Benefits may include improved skin condition, prevention of skin injury and skin infection, improved thermoregulation due to decreased transepidermal water loss, absorption of essential lipids, and enhanced

maternal–infant bonding with repetitive tactile stimulation.[2-4]

However problems can be associated with oil massage. Occasional side effects can occur if the oil used for massage is contaminated which can lead to skin rash. If massage is done too vigorously and with lot of pressure, it can cause injury and trauma to the baby. Sick babies and babies with a heart problem should not be given massage as safety of massage in them is not known.

Fracture in newborn can have many reasons like birth injuries, osteogenesis imperfecta, child abuse. An innocent procedure like traditional oil massage can also result in fracture. We present an interesting case of fracture following vigorous oil massage for its rarity, and to create awareness.

Case Report:

A 15 days old male baby was brought with the complaints of reduced movement, pain and swelling in right forearm of 1 day duration. The baby was born full term to a non consanguineous parent. His birth weight was 3.12kg and APGAR score was good. Post natal period was uneventful except for neonatal hyperbilirubinemia for which he had received phototherapy. At home he was getting daily oil massage and bath by traditional techniques. On examination there was diffuse, tender swelling on the ventral aspect of right forearm which was firm in consistency and there was paucity of movement. X ray revealed fracture of proximal radius and middle third of ulna (Fig 1). His Calcium,PO₄, Alk Phosphatase values were 9 mg/dl, 5mg/dl, 210 U/L respectively. Skeletal survey did not reveal any other fracture. Baby was treated with a short arm, below the elbow cast. Repeat X-Ray after 3 weeks showed improvement (Fig 2) and at follow up baby was moving both the limbs.



Fig 1: X ray showing fracture of proximal radius and middle third of ulna.



Fig 2: Repeat X-Ray after 3 weeks showing improvement

Discussion:

Traditional oil massage is a common practice established in many communities, particularly throughout the Asian subcontinent.[5-7] Benefits of massage include stimulation of circulatory and gastrointestinal systems, better weight gain, lesser stress behaviour, positive effects on neurological and neuromotor development and infant-parent bonding, and improved sleep. Massage with oil results in improved skin condition (increased hydration and surface lipid content) and barrier function, resulting in reduced loss of trans-epidermal water and improved thermoregulation, transcutaneous absorption of fatty acids contributing to improved nutrition and better somatic growth.[1]

Although massage therapy is considered a safe practice and there are no significant harmful effects, if performed vigorously child may tend to have adverse effect like fracture. An innocent procedure like traditional oil massage can also result in complications.[8]

Fracture in newborn can have many etiologies. 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 that falls do not result in this type of fracture.

In conclusion, simple causes like oil massage also to be kept in mind in dealing with neonatal fractures.

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