

## Non medical treatment of neonatal jaundice in Qadisiah

\*Mohammed Mojar Al-Shamsi

\*\*Maha Hamid Al-Sakban

### Summary

**Background** :a variety of attitudes and non medical methods are practiced in Qadisiah in the treatment of neonatal jaundice.

**Objectives** : to delineate current attitudes and methods used by the mothers and grandmothers of neonates with neonatal jaundice in Qadisiah.

**Patients and methods** :the study involved 125 neonates attending the outpatient clinic or admitted to the neonatal care unit in the maternity and children teaching hospital in Diwaniah. Information were collected regarding the use of these methods.

**Results**: the types of these methods were: fixing gold rings in the infant swaddle (72%), herbal fluids (70%), applying garlic rings around the neck, wrists and ankles (63%) , fixing a group of stones in the swaddle ( 62%.), application of Henna to the skin ( 50% ).

**Discussion** : non medical methods were used in 80% of the neonates with neonatal jaundice in Qadisiah. Reliance on these methods could results in a delay in seeking medical advice and development of complications.

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### INTRODUCTION

Hyperbilirubinemia is a common and in most cases benign problem in neonates. Jaundice is observed during the 1st week of life in approximately 60% of term infants and 80% of preterm infants <sup>(1)</sup>. Causes of neonatal jaundice are numerous and its treatment depends on a variety of factors including the level of serum bilirubin, the type of hyperbilirubinemia ( direct, indirect ), the general condition of the baby, blood group incompatibility and others <sup>(2)</sup>. Thirteen percent of breast-fed infants develop hyperbilirubinemia ( > 12 mg Idl ) in the 1st week of life. Giving supplements of glucose water to breast fed infants is associated with higher

\*College of medicine depart. Of pediatrics Al-Qadisiah university

\*\* Maternity & children hospital Al-Qadisiah health office

bilirubin levels owing in part to reduced intake of the higher caloric density breast milk<sup>(1)</sup>. Its scientifically incorrect to give glucose or sugar water to infants after birth as a supplement to breast milk or to remove bilirubin as healthy neonates and neonates with neonatal jaundice need absolutely no other fluid than the breast milk<sup>(3)</sup>.

A variety of attitudes and non medical methods are practiced in Qadisiyah in the treatment of neonatal jaundice. The goal of this study was to delineate current attitudes and methods used by the mothers and grand mothers of neonates with jaundice in Qadisiyah.

### Patients and methods

The target population of the study was mothers, grand mothers and other Caregivers of neonates less than 2 weeks of age with jaundice attending the outpatient clinic or accompanying neonates admitted to the neonatal care unit in the maternity and children teaching hospital in Diwaniyah. Information were recorded using a schedule to collect data about the following: the infants age, sex, weight, blood group, Hb level, TSB level, address, the age of the father and mother, the educational level of the parents, blood group of the mothers, the degree of consanguinity between the parents, the socioeconomic status of the parents, the presence of antenatal care, the sequence of the baby in the family, place and mode of delivery, type of feeding, history of previous baby with jaundice, the caregiver of the baby (mother, grand mother or others), the attitude of the family to the non-medical methods of treatment of jaundice, the types of non medical treatments used by the family. The gestational age of the baby was assessed and the presence of delay in seeking medical advice was observed (we define the delay as: the need for exchange transfusions, presence of complications (kernicterus) and features suggestive of sepsis). The cause of delay was asked for and the fate of neonates with delayed presentation was also noted. The study covered 125 neonates chosen randomly from those attending the outpatient clinic or admitted to the neonatal care unit in the maternity and children teaching in Diwaniyah over a period extending from November 1<sup>st</sup> 2000 to march 1<sup>st</sup> 2001.

### Results

The total number of neonates studied was 125, of these 78 were males and 47 females, 112 were less than 8 days of age and 13 were from 8 to 14 days of age. The weight of the babies ranged from 1.5 kg to 4.6 kg. The level of serum bilirubin ranges from 10 mg / dl to 35 mg / dl. Seventy two neonates were from urban areas and 53 from rural areas, the ages of the parents ranged from 15 to 55, and the relation between the educational level of the parents and the use of these methods is shown in table 1.

The educational level	Mother		Father	
	No	%of users	No	%of users
Illiterate	35	80	15	80
Primary school	27	78	30	77
Intermediate school	23	83	34	79
Secondary school	22	82	25	84
University	18	78	21	81

**Table ( 1 )** The relation between the educational level of the parents and the use of non medical methods

The effect of economic status of the families on the frequency of the use of the methods is shown in table 2 .

The economic status	No	% of user
Poor	35	80
Average	46	78
Good	24	82
High	20	80

**Table ( 2 )** The relation between the economic status of family and use of non medical methods

Concerning the consanguinity 73 of the parents (58%) were related and 52 (42%) were not . Seventy seven (62%) of the mothers had no antenatal care during pregnancy and 48 (38%) were attending the antenatal clinics . forty three (34%) of the neonates were the 1st born to the parents and 82 (66%) were subsequent , eighty one neonates (65%) were delivered in the hospital and the remainder (44) at home . Regarding the mode of delivery , 99 neonates (79%) delivered by vaginal delivery and 26 (21%) by cesarean section . Nine neonates only (7%) were fed by breast milk only ,87 (70%) were fed mixed feeding with breast or artificial milk and herbal fluids(sugar water , glucose water , Kammon water and madhgah ) while 29 neonates (23%) were bottle fed .Forty seven families (38%) had a previous baby with neonatal jaundice .The mothers take care of the babies in 66% of cases , the grand mothers in 22% and others (maternal and paternal aunts ) in 12% . Sixty seven families (54%)were satisfied that these methods are effective in the treatment of neonatal jaundice,33 families (26%) thought that these methods may be helpful in the treatment of neonatal jaundice , and 25 Families (20 %) only were not satisfied that these methods are useful in the treatment neonatal jaundice. The types of the non medical methods used in the treatment of neonatal jaundice are summarized in table (3).

Type	No	% of user
Fixation of gold rings in the infants swaddle	90	72
Herbal fluids / water ( sugar water , glucose water , * kammon , madhghah )	87	70
Garlic	79	63
Stones	78	62
** Hinna	62	50
Lamp light	50	40
** Others	48	38

\* Kammon , madhghah : herbal powder mixed with water and given to the babies .

\*\* Hinna : a plant , the leaves of which are crushed to form powder mixed with water and used as hair coloring or applied to the palms and soles as cosmetic .

\*\*\* others : Harmal , youghurt , fish , Bat bones , pea

**Table ( 3 )** The types of non medical treatment used by mothers in Qadisiyah

Fixing gold rings in the infant swaddle was the most common (72%) followed by feeding the infant herbal fluids ( sugar water , glucose water , Kammon and madhghah ) (70%) , applying a garlic rings around the neck ,wrists and ankles (63% ) , fixing a group of stones in the infant swadle (the group usually contains a yellow one ) (62 %)( figure 1) , applying Hinna ( after mixing the powder with water) to the infant skin (50 %) and keeping a fluorescent lamp - on near the infant cot (40%) .



**Figure (1)** A neonate had a group of stones fixed to his swaddle

Fifty four neonates (43 %) had a delay in seeking medical advice. Thirty neonates required exchange transfusions (24%), 15 developed Kernicterus (12 %) and 9 had sepsis (7%) . The causes of delay are summarized in table 4 .

Cause	No	%
Reliance on the non medical methods	35	71
Ignorance	24	49
Previous medical and paramedical advice	14	29
Socioeconomic	13	27
Grandmother advice	40	82

**Table ( 4 )** Causes of delay in seeking medical advice in 54 neonates  
Reliance on the non medical methods was the most common cause ( 71%) followed by ignorance ( 49%) .

### Discussion

Although no previous study had focused on the use of non – medical methods in the treatment of neonatal jaundice in Qadisiyah , the use of these methods is common in this city as (80%) of the families in the study use one or more of these methods in treating their neonates with neonatal jaundice . Although some of these methods are not harmful to the infants by themselves such as fixation of gold rings and stones in the infant swaddle and keeping a fluorescent lamp – on , but reliance on these methods will probably cause delay in asking the medical advice .Other methods are potentially not free from harm , herbal fluids may cause nausea , vomiting and dehydration and subsequently an increase in the serum bilirubin (1) , in addition to reduced intake of the higher caloric density breast milk . Application of Henna to the infant skin will cause orange – brown discoloration of skin subsequently obscuring the intensity of jaundice , in addition to the fact that Henna is probably one of the precipitating factors of haemolysis in G6 PD deficient neonates (4) . Neither the educational level nor the economic status of the parents have an effect on the frequency of the use of these methods (tables 1,2 ) , probably the sociocultural factor is important as the source of the advice is usually the grandmothers and most families thought that the grandmothers are expert in the care of the neonates. The other factors such as the residence , the age of parents and the gestational age of the neonates also have no effect on the use of these methods . Nine neonates only (7%) were absolutely breast fed , this figure is surprisingly small and was in contrast to our impression and to the instructions of the scientific committee of breast feeding support (5) and the program of breast feeding . What is needed ? actually is an extensive educational program particularly in the primary health care centers , maternity hospitals and even private clinics on the undoubted value of breast feeding (6,7) and its value in neonatal jaundice and the avoidance to some extent , of the use of the non medical methods in the treatment of neonatal jaundice .

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