



CHILDREN'S DISEASES AND CURING METHODS IN A POPULATION OF THE SHENDI AREA (SUDAN)

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The present work provides actual information on health services, modern and traditional methods of healing in view of babies, infants, and children. The material was collected in the village of Umm 'Ali (Shendi area, Sudan). Material of this nature might be important in view of planning medical and hygienic measures for a specific population.

Introduction.

The village of Umm 'Ali (sometimes also called Gabal Umm 'Ali) is situated on the east bank of the River Nile, approximately half way between the larger, towns of Atbara and Ed Damer to the north and Shendi to the south. The area is the homeland of the Ja'alín tribe and also contains the famous ruins of ancient Meroe.

The material for the present paper was actually collected in 1989 and scheduled for publication in 1991-2 in the then German Democratic Republic. It is well known that the re-unification of Germany created many unforeseen problems and one of them was the fact that several, once reputed publications had to close down. Due to this unexpected circumstances, a new publisher had to be found and the authors are grateful to the Annals of the Náprstek Museum for accepting the manuscript.

Medical Services available at Umm 'Ali.

Modern medical services were introduced to the village in 1957, when the first clinic opened its gates. The clinic was run by a male nurse (not

from the village itself) who was trained in the Nursing School in Khartoum. The services provided included diagnosing and treating minor uncomplicated cases such as diarrhoea, constipation, cough, and fever. If the therapeutic attempts at the village clinic failed, the patient was taken by train or lorry to Shendi (53 km) or to Atbara (75 km), for hospital treatment. Some years after its opening, another nurse, this time a native of Umm 'Ali, joined the clinic, together with a medical assistant (known locally as 'Hakeem'), an experienced nurse, with further training in diagnosis and treatment.

Since its establishment, the clinic of Umm 'Ali rendered out-patient services to local inhabitants and the neighbouring villages of Gado, El Daiga, and Wadi el Dan. However, in 1980, clinics were established in some of these villages. In 1986, two wards for in-patients were built in Umm 'Ali clinic, but till now these wards have not been used. In general, the medical assistant should also provide a 24 hour 'on call' service and, if necessary, visit patients at home.

The clinic has provided invaluable services, not only in the treatment of simple uncomplicated cases, but also in the field of disease prevention with vaccination against the usual childhood diseases and against tetanus, cholera, etc., for pregnant women. Health education is also provided for mothers taking children to the clinic.

The staff of the clinic included, in 1989, a male medical assistant, two male nurses, and a female health worker (known in Arabic as 'Ziaria Sihia', or literally 'hygiene visitor'). The latter is responsible for teaching and guiding woman in matters related to nutrition, hygiene, vaccination, and family planning, and the registration of births. Registration of deaths is not undertaken.

Three midwives were practising in Umm 'Ali (for more detailed information see Ali & Roese 1989). Although these midwives work mostly independently of the clinic, for two days per week they hold consulting hours for pregnant women for regular pre-natal check-ups. Referral is made to the medical assistant for advise when necessary.

The clinic is situated on the periphery of Umm 'Ali and is composed of three rooms (one room for reception, waiting and registration of the parents and their complaints, and later for registration of medicines prescribed). The same room is utilized by the medical assistant to see his patients. In another smaller room medicines are dispensed and in the third room injections, dressings, etc., are applied. The equipment used is basic and includes stethoscopes, sterilizer for syringes and other equipment, and

thermometers. There is simple and basic diagnostic and laboratory equipment including a microscope, slides and small pieces of other equipment. However, these are not used at the present time since there is no technician to run the laboratory. The medical assistant has the facilities for detecting glucose or bilirubin in urine for the diagnosis of diabetes or jaundice, respectively.

There are two latrines for men and women.

Drinking water is provided in a small shaded area in two large vessels made of fired clay, locally known as ,Zeer‘ or ,Zir‘. The material of the vessels is porous and thus allows water to evaporate, thereby cooling the contents. Which is, by the way, a very ancient construction. There are two metal cups which are left on top of the vessels for use by all those working in and attending the clinic.

The ,Zeer‘s‘ are covered to keep flies out and the cups are usually placed upside down on top of the cover. Two vessels are placed together so that one is being used and the other can be cleaned and refilled and the water allowed to stand for a day. Any suspected materials can then settle out and the water is clear, cool and refreshing.

General Aspects on Medical Treatment.

Usually, sick children are taken to the local clinic when the mother (or father) notices an abnormality in the condition of the child. Since Umm ‘Ali is situated in a fairly developed area, people have now for many years trusted and used the facilities provided by the clinic. Some even go to the extent of taking their children to the clinic for the slightest symptoms (e.g. start of a common cold). This can be ascribed to an innate cautious attitude of the parents or possibly to the fact that medical care is provided free of charge.

Traditional methods of healing (to be described later) are only resorted to when ,western-type‘ medicines have failed. People are now increasingly aware of the possible dangers of self-medication. Nonetheless the practice of self-medication either by pharmaceutical agents or by traditional herbs and religious means (e.g. ,Tawiza‘ or ,Higab‘) is common. It is also quite common that the mother of a sick child seeks advice, or advice is given to her by another women who claims to have a child, or have seen a child, with similar symptoms and she may offer a medicine or suggest a therapeutic agent for curing. It is seldom that the mother (more rarely the father) starts treatment by traditional means. However, if traditional means are tried and then fail, the child will be taken to the clinic. Little or

nothing will be revealed about the previous therapeutic attempts at home, and a firm history of a recent attack will be given.

Diet and Nutritional Status.

Close contact between families of different socio-economic classes ensure that children do not go hungry. However, some children from poor families, and also of some relatively well-off families appear skinny and undernourished. Nevertheless, there are no cases of real undernourishment, known locally as 'Kwash'. Undernourishment may partly be explained by the economical status of the family, and partly by the fact that most of the food such as vegetables, fruits, etc., produced on farms and in gardens in or near Umm 'Ali are transported to the neighbouring towns of Shendi and Atbara because they can be sold for a better price than if sold in the village.

Another factor involved here is the custom for adult male members of the family to eat together, without the children. The best food (especially meat) is given to the adult males and small children either eat alone or with their mothers and older sisters. They eat any food remaining from the men's table but are given comparatively small quantities of food.

Breast feeding.

Breast feeding is practised by nearly all mothers. They feed their babies for periods ranging from 1 1/2 to 2 years. When babies are 6 months or older, they are given additional semi-solid food such as mashed rice, sweet potatoes or potatoes. In some cases, relatives working in big cities or, more commonly, in the oil-rich countries of the Arabian Gulf, send tins of baby food to their relatives at home. The amount of powdered milk available, however, is never great and mothers depend largely on goats' milk as a bottle-feeding supplement. Nowadays, with the problems of draught and desertification, and the high costs of the traditional animal foodstock Alfalfa (Barsam), the number of goats kept by the villagers has noticeably decreased.

Weaning.

Weaning is encouraged by the mother by applying sour dough to her nipples and letting it dry. Babies then find it rather unpleasant to feed from the breast.

Mortality.

The infant mortality at Umm 'Ali is quite low. The medical assistant, although he does not keep a registry of deaths, asserts that only two children died (from disease) in 1988. No doubt the care provided during pregnancy and increase in health education have contributed to the low infant mortality.

Record of Diseases in Umm 'Ali Clinic in 1989.

It was calculated that the 'Hakeem' attends to about 600 to 750 cases per month. The number of cases increases noticeably during the school term. This may be due to close contact between pupils in classes and in the boarding-house in which pupils from neighbouring villages stay during term time (their number is about 100). These pupils drink from the same four water pots, sharing one or two metal cups.

The number of children (ranging from one day old to 14 years of age) seen in the clinic represents only 10 to 15 p.c. of the total number of patients. It is estimated that the population of Umm 'Ali is some 3,000 according to an unofficial count made early in 1985. It is expected that more than 50 to 60 p.c. of those are under 14 years of age.

The following tables represent sample records of diseases (or rather symptoms) treated in Umm 'Ali Clinic during the time between March and June 1989.

Record of Diseases in Umm 'Ali Clinic
March 1989

1 year		1-4 years		5-14 years		Total No.	Disease or symptom	Drug prescribed
male	female	male	female	male	female			
-	-	4	8	9	1	22	common cold	Ampicillin (oral)
-	-	1	-	3	1	5	tonsillitis	Penicillin (i/m)
-	-	1	-	6	4	11	malaria	Chloroquine (i/m, oral)
-	-	-	-	3	1	4	ear infection	Penicillin (drops)
-	-	-	-	2	-	2	dysentery	Metroniazole (oral)
-	-	1	-	1	-	2	colic	Hyoscine (oral)
-	-	-	-	1	-	1	fatigue	Vit. B complex (oral)
-	-	3	5	3	-	11	eye infection	Silphonamide (drops)
-	-	1	1	-	-	2	vomiting/ diarrhoea	Oral -AID (commercial preparation)
-	4	-	3	2	-	9	diarrhoea	Diphenoxylate/Atropine (oral)
-	-	-	2	-	-	2	pneumonia	Penicillin (oral)
-	-	-	-	-	1	1	cough	Actifed (commercial preparation)
-	-	-	-	1	-	1	abscess	Surgery and Ampicillin
Total:						73		

Record of Diseases in Umm 'Ali Clinic
April 1989

Age						Total No.	Disease or symptom	Drug prescribed
1 year		1-4 years		5-14 years				
male	female	male	female	male	female			
-	-	11	5	16	11	42	common cold	Ampicillin (oral)
-	-	3	-	1	-	4	tonsillitis	Penicillin (i/m)
-	-	1	2	9	8	20	malaria	Chloroquine (i/m, oral)
-	-	-	-	3	2	5	ear infection	Penicillin (drops)
-	-	1	-	2	1	4	dysentery	Metroniazole (oral)
1	-	-	-	2	-	3	colic	Hyosine (oral)
-	-	-	-	1	-	1	fatigue	Vit. B complex (oral)
-	1	5	8	10	3	27	eye infection	Sulphonamide (drops)
-	-	1	-	-	-	1	vomiting/ diarrhoea	Oral -AID (commercial preparation)
-	-	4	-	2	1	7	diarrhoea	Diphenoxylate/Atropine (oral)
-	-	2	2	2	2	8	pneumonia	Penicillin (oral)
-	-	1	-	-	3	4	cough	Actifed (commercial preparation)
-	-	-	-	-	-	0	abscess	-
Total:						126		

Record of Diseases in Umm 'Ali Clinic
May 1989

Age						Total No.	Disease or symptom	Drug prescribed
1 year		1-4 years		5-14 years				
male	female	male	female	male	female			
-	1	2	-	2	2	7	common cold	Ampicillin (oral)
-	-	1	1	-	2	4	tonsillitis	Penicillin (i/m)
-	-	-	2	-	1	3	malaria	Chloroquine (i/m, oral)
-	-	-	-	-	-	0	ear infection	-
-	-	-	-	-	1	1	dysentery	Metroniazole (oral)
-	-	-	-	-	-	0	colic	-
-	-	-	1	-	-	1	fatigue	Vit. B complex (oral)
-	-	-	-	-	-	0	eye infection	-
-	-	-	-	-	-	0	vomiting/ diarrhoea	-
-	-	-	-	1	-	1	diarrhoea	Diphenoxylate/Atropine (oral)
-	-	-	-	-	-	0	pneumonia	-
-	-	-	1	-	-	1	cough	Actifed (commercial preparation)
-	-	-	-	-	-	0	abscess	-
Total:						18		-

Age						Total No.	Disease or symptom	Drug prescribed
1 year		1-4 years		5-14 years				
male	female	male	female	male	female			
1	1	2	1	4	3	12	common cold	Ampicillin (oral)
-	-	-	-	-	-	0	tonsillitis	-
-	-	-	-	1	1	2	malaria	Chloroquine (i/m, oral)
-	-	-	-	-	-	0	ear infection	-
-	-	-	-	-	-	0	dysentery	-
-	-	-	-	-	-	0	colic	-
-	-	-	-	-	-	0	fatigue	-
-	-	-	1	2	-	3	eye infection	Sulphonamide (drops)
-	-	-	-	-	-	0	vomiting/ diarrhoea	
1	-	2	2	-	2	7	diarrhoea	Diphenoxylate/Atropine (oral)
-	-	-	-	1	1	2	cough	Actifed (commercial preparation)
-	-	-	-	4	1	5	abscess	Surgery and Ampicillin
-	-	1	-	1	-	2	pneumonia	Penicillin (oral)
Total:						30		

Traditional Methods of Healing.

As mentioned before, the villagers have used and trusted ,Western medicines' for a relatively long time, the use of which has resulted in a concomitant decrease of the traditional practices which were common previously. Nowadays traditional methods of healing are resorted to when other conventional methods of therapy (medical or surgical) have failed. Traditional methods of treatment are rarely a first choice. However, if used and found useless, a quick shift to the clinic would be made. After traditional methods have failed, the parents of the child having undergone such treatment, deny the fact. In some rare occasions, and particularly in certain diseases or symptoms (for instance jaundice), the conventional therapy will be taken side by side with traditional treatment (in this case cautery).

The following traditional methods are practiced:

- Cauterization (locally known as ,Kaie')

This is an ancient method of healing. Its use, due to enlightenment and appreciation of its potential dangers, is however, decreasing. Some diseases are claimed by the villagers (especially by the old generation) as ,diseases not for doctors'. This reflects the apparent failure of conventional medicine in treating such conditions.

Cauterization is practiced in diseases (or symptoms) such as dislocations, bone fractures (after bone setting), jaundice (regardless of

its type or cause). Another reason for cauterization practiced on children is not strictly medicinal. When a woman repeatedly loses babies during birth or shortly afterwards, the newborn baby may be subjected to cauterization. This is done to protect the baby from the destiny of his/her predecessor. The position of cauterization in this case is usually the forehead. In other cases, the position of cauterization is on the back of the neck (nuchal region), or more commonly on the forearm and the dorsal side of the arm, leaving two scars. A rare type of cauterization is practiced with babies during teething. A very fine metal rod is heated and placed on the gum. This is done when teeth fail or are late to erupt.

Cauterization is carried out by using a cautery (iron rod or big nail) which is placed in a fire and is applied when red hot. Sometimes cauterization is done while the child is fasting, and is given a drink of milk or water immediately after treatment. The site of cauterization is not necessarily related to the body area affected.

In most cases children are brought to a neighbouring village for treatment. It is noteworthy that if the 'treatment' fails or results in deformity or even death, no action against the 'practitioner' is taken.

- Sorcery (locally known as 'Sahir')

Even the educated villagers firmly believe in the 'Evil Eye' and 'Envy'. Many cite the Prophet Muhammed who is reputed to have said 'Evil Eye is true'. People fear that their children could be affected adversely by 'Evil Eye' or 'Envy' (e.g. by causing sickness, low performance at school or even death). Some people are classified as being notorious for being 'dangerous' or by having a 'Hot Eye'. This means that if they, for example, praise something or make a parable (e.g. one says 'this car is as white as milk'), and if something goes wrong with the car, they would be accused of having a 'Hot Eye' or being 'Sahir' (meaning practising magic or sorcery). This can be counter-acted or prevented by certain verses from the Holy Qur'an. They are recited immediately after the 'Sahir' has uttered his words or by wearing certain Quranic verses, written on small pieces of paper and wrapped in a leather sachet, worn as a necklace or around the arm ('Higab'). Sometimes, instead of the Holy Quranic verses, certain 'magical' shapes (squares, circles, irregular designs) are drawn by the person practising sorcery. This is also thought to counteract or prevent 'Evil Eye'.

- Driving-out of the devil or spirit (locally known as ,Tard el Shaitan')
A rare form of treatment is driving-out of the devil or spirit (,Shaitan'). The fakki (holy man) recites loudly verses from the Holy Qur'an while touching the affected part of the body of a child. Occasionally, the fakki would spit into the face of the child. This is supposed to expel the devil or spirit having taken hold of the child.
- Scarring (locally known as ,Fasda')
Scars are applied with a small sharp knife in case of eye troubles and chronic headache not responding to ,normal' remedies. Two fine incisions are made on either side of the face near the eyes, lateral to the eye region.
- Blood letting (locally known as ,Higgamma')
This practice is not common in Umm'Ali, although in certain parts of the country (e.g. the West) it is still in use.
- Bone-setting (locally known as ,Gaber el Kissor')
Some villagers still believe that an experienced bone-setter is superior to an orthopedic surgeon. Instruments used are sticks of even length and diameters which are placed carefully on the affected parts of the body and are strapped with a piece of cloth. The practitioner is usually an experienced old man known locally as ,Baseer' (,one who ,sees''), which is the autonym of the Arabic word for ,blind'. In case the result is unsatisfactory, the same or another bone-setter has to repeat the process, or a doctor may be consulted. Although Umm 'Ali is surrounded by a semi-circle of dry hills and many children climb these frequently, bone fractures are relatively uncommon.
- Treatment of mental disorders (locally known as ,Ginnoon')
In case of mental disorders, a holy man (fakki, feqi) writes verses of the Holy Qur'an on a blackboard. The writing is washed away with water into a cup and the liquid is drunk by the sick person. This type of treatment seems to be quite common among the Sudanese and it is, for instance, also reported throughout the Muslim North of the country.

Traditional Medicinal Herbs (,Aashab Tibia').

There are a number of herbs known to the people which are used for certain remedies, as follows:

- Hibiscus spp. (locally known as 'Karkadeh')
- Karkadeh is a kind of tea obtained from the dried red flower bracts

of *Hibiscus* spp. used as a sweetened softdrink. It is very popular among the peoples of Egypt and Sudan. At Umm'Ali, it is applied as a general tonic especially during a common cold. Although, it has no specific medicinal use, some pharmacological researches were undertaken in Sudan and elsewhere. The results showed *Hibiscus* flower bracts are rich in vitamin C and have antihypertensive qualities.

- *Acacia* spp. (?) (locally known as ,Talih‘)
Pieces of dried wood of this plant produce smoke during burning which is reputed to be useful in case of some inflammatory conditions (e.g. rheumatoid arthritis).

-(locally known as ,Hilba‘)
Used either powdered in a poultice to cover inflamed areas, and as a counterirritant. It is sometimes incorporated in food (for instance rice pudding) and given to children with gastrointestinal troubles. Besides this, it is used as a carminative consumed by lactating mothers, because it supposedly increases milk production.

- *Acacia indica* (locally known as ,el-Garad‘)
The dried seeds and fruits of this plant are applied against cough, common cold, fever, and other minor ailments. Seeds and fruits are powdered and, mixed with sesame oil and the whole body is massaged with this suspension. It also can be placed on burning coal (in a special container called ,Mubkhar‘, made of burned clay) and the sick child will be encouraged (or forced) to inhale the smoke produced. Sometimes a blanket is used to cover the head or the whole body while inhaling the smoke. Another type of treatment, although rarely used, is to place the seed/fruit under the tongue, especially in throat infections and common cold. The fruit is also used in the tanning process for leather.

- (locally known as ,Tormos‘)
This legume is consumed boiled and salted. It is supposed to enhance bone healing after fractures.

- Cumin (locally known as ,Green Cammon‘)
It is applied to babies and infants with gastrointestinal upset. The seeds are boiled in water which is cooled afterwards. Some drops of the liquid are added to the feeding bottle.

Another type, known as ‚Black Cammon‘ is used in the following manner: seeds of the plant are placed on burning coal and the smoke is inhaled by the child which is sitting directly by the fire (or when the smoke has filled the room). It is supposed to expel the ‚evil‘ spirits or the satan („Shaitan“), possessing the child.

Traditional Treatment of Burns, Bruises and Cuts.

- Burns (locally known as ‚Hirrog‘)

If burns are not very severe, they are left alone. The only treatment may be cold water into which the burned parts of the body are dipped (for instance fingers).

- Bruises and Cuts (locally known as ‚Girooh‘)

Some years ago, it was believed that urinating on the wound had a good effect. B.H. Ali was informed by an old man of the village who was telling him of the advantages of urinating on a wound. He claimed that there were no ill-effects.

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