

## OBSERVATIONS ON MANGO RASH

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### INTRODUCTION

It is a common belief among the people of the Philippine Islands that the transient rashes of erythematous type occurring during the hot season are caused by the eating of mangos (*Mangifera indica* L.). However, there is no definite evidence to indicate that the mango is the causative agent. It has long been recognized that strawberries, crustaceans, and oysters are the etiologic factors in certain urticarias and other rashes, local œdemas, etc. These substances seem even to be able to exercise an influence on the nursing baby through the milk of the mother.<sup>1</sup>

The object of the present study is to find out whether the mango in the Philippines is really a responsible factor for some of these transient rashes occurring so commonly from April to July. At the same time observations were made to ascertain if this fruit has any influence on the nursing baby through the milk of the mother.

Four newly delivered nursing mothers in the obstetrical ward of the Philippine General Hospital were chosen and were fed usually six mangos daily with their meals. Careful attention was given to select patients who were free from skin rashes. Daily observations were made on both mother and baby, particularly as to the development and disappearance of rashes; subjective symptoms were noted carefully. Purgatives were given, when necessary, to eliminate intestinal auto-intoxication as far as possible. It may be stated that both mother and baby were sleeping under mosquito nets so that mosquito bites were practically excluded.

<sup>1</sup>Firmin observed urticaria in an infant whose nursing mother had partaken of oysters and fish. Cited from Pfaundler and Schlossman, Diseases of Children, translated by H. L. N. Shaw and L. La Fetra. J. B. Lippincott Company, New York (1908), 4, 443.

## CASE I

N. C., Filipino woman, 24 years old, married to an American. She was admitted to the hospital on June 6, 1914, and delivered on the same day. Family history is negative. Previous history is unimportant, except that she states that she is prone to have a rash after eating several mangos. The patient is fairly well developed and well nourished, and shows no signs of dyspnoea or discomfort. Examination of the systems is negative.

The baby (female) was normally delivered, and is fairly well developed. This is the fourth child. Subjective examination of the systems is negative. The skin is light colored.

June 6. Four mangos only were given this day.

June 7. Examination of the mother showed a few papulomacular areas with some vesicles. These are of a uniform size, about that of a pinhead or a little larger, and are purplish red. These eruptions are located on the interscapular region, and itch considerably. Temperature is normal. She is constipated.

Examination of the baby is negative.

June 8. The mother has developed more areas of the same kind on her back. She complains of marked itching. She is constipated.

The baby is apparently normal.

June 9. Some vesicular eruptions of about a pinhead in size have appeared on both sides of the neck of the mother. She complains of marked itching. She was given a cathartic this morning, and had four bowel movements.

The baby shows a few maculopapular eruptions on the cheeks. These are about 1 millimeter in diameter.

June 10. The mother has developed numerous papular vesicles on her chest and neck and a few on the extensor surfaces of both arms. The temperature is normal. She has had 6 bowel movements.

The eruptions on the baby's face have disappeared, but she has developed a few vesiculopapular areas on the neck. In the afternoon of the same day the rash had appeared abundantly on the neck and to a slight extent on the back. The baby is otherwise comfortable. No subjective symptoms of any kind were noted.

June 11. Examination of the mother shows an extensive acute vesiculopapular rash on her chest, back, and neck. Her bowels are normal. Temperature is normal. She complains of marked itching.

The baby has developed a few eruptions on the extensor surfaces of the lower extremities. Those on the neck and back are still present.

June 12. In the mother, the rash is not so acute as on the previous day. Itching is very much diminished.

The baby still shows a few areas on the neck, but those found on the extremities have almost disappeared.

June 13. The mango feeding was discontinued. Calomel and saline purgative were given to the mother, and she had two bowel movements. She no longer complains of itching. Both mother and baby look very much as on the previous day.

June 15. The eruptions on the chest and back of the mother are very much diminished, and the vesicles are in a drying condition.

The baby has developed a few more papulovesicular eruptions on the neck. Those found on other parts of the skin have disappeared.

June 16. The rash still persists to a slight degree in both mother and baby. They were discharged from the hospital subsequent to the examination.

## CASE II

J. L., Filipino woman, 27 years old, married. She was admitted to the hospital on June 20, 1914, and delivered on the next day. Family history and previous diseases are negative. The patient is fairly well developed, pale, and lying flat on bed without any sign of dyspnoea or discomfort. Examination of the systems is negative.

The baby (male) was prematurely born and is small. The skin is dry; the subcutaneous tissue is very loose.

Mango feeding was begun June 21. The mother was given 6 mangos for five days, 5 mangos for a day, and then 8 mangos for a day. She was observed twice a day during the period of the experiment. After eight days of feeding she failed to develop a rash.

On the eighth day, the baby had a few papulovesicular eruptions on the face which lasted for two days.

The mother and child were discharged on June 29.

## CASE III

A. P., Syrian woman, 26 years old, married. She was admitted to the hospital on June 20, 1914, and delivered of a female child on the next day. Family history and history of previous diseases are negative. Examination shows some papules on the mammary regions in drying condition.

June 21. Mango feeding was begun.

June 22. The mother complains only that her bowels are constipated. There is no rash either on the mother or baby.

June 23. The mother complains of marked itching of the skin of the chest and in the axillary regions. On examination, there are many papules and papulovesicles in acute condition on the above-mentioned places.

The baby has developed a few papulovesicles on the face.

June 24. The mother complains less of itching. The eruptions found yesterday are very much diminished in extent.

The previous rash of the baby is much increased. She has also developed some new areas on the extensor surfaces of her legs and thighs.

June 25. Mango feeding was discontinued. The mother does not complain of itching. Eruptions on her body have disappeared.

Examination of the baby shows that of the papules of the previous day only very slight traces are left on the face.

June 26. The mother still has some traces of the rash; otherwise she is comfortable.

The baby is almost the same as on the previous day.

June 27. The mother is clear from the rash of the previous days.

The baby is apparently normal.

June 28. Mother and baby are apparently normal.

June 29. The mango feeding was resumed. The mother and baby are negative.

June 30. The mother and the baby are apparently normal.

July 1. The mother is negative.

The baby has developed a few papules with some papulovesicles on the face and also on the extensor surfaces of the arms.

July 2. The mother is normal.

The baby has a few eruptions on the arms, although these are not so severe as on the previous day. The baby and the mother were discharged from the hospital after the examination.

#### CASE IV

P. C., Filipino woman, 20 years old, married. She was admitted to the hospital on June 20, 1914, and delivered on the next day. Family history and history of previous diseases are negative. The patient is fairly well developed, and is well nourished. She has apparently no signs of dyspnoea nor discomfort, but is not able to be about. Examination of the systems is negative.

The baby (male) was normally delivered, and is fairly well developed. Examination of the systems is negative.

June 21 Mango feeding was begun.

June 22. The mother has developed a few maculopapules on her right arm. No itching nor burning sensation is felt. The bowels are constipated.

The baby is apparently normal.

June 23. The mother complains of marked itching. She has developed many small papules and vesicles on the neck and breasts. She was given a saline purgative, and had seven movements during the day.

The baby is normal.

June 24. Examination of the mother shows that the eruptions of the mammary region have almost disappeared, but she has developed a few of the same kind on her back. She still complains of marked itching.

The baby shows some papulovesicular rash on the face and neck.

June 25. Mango feeding was discontinued. The mother does not complain of itching. The vesicles on her chest are in a drying condition.

The baby still shows a few areas on the face.

June 26. The mother is almost free from rash. Itching has discontinued. Examination of the baby is negative.

June 27. Mango feeding was resumed.

June 28. The mother again complains of slight itching. On examination it was found that she has developed a few eruptions of papulovesicular character on the neck, shoulder, and infraclavicular regions.

The baby has also developed a few papulovesicles on the neck.

June 29. The mother shows some erythema on the neck and back. The itching has discontinued.

The baby still has a few papulovesicles on the face.

The mother and child were discharged from the hospital subsequent to the examination.

#### DISCUSSION AND CONCLUSION

The frequent occurrence of these rashes in a certain season of the year, generally from April to July, coincident with the hot season, leads us to a suspicion that these rashes are nothing more than the ordinary *miliaria rubra* frequently observed at this time. But when it is considered that these rashes were developed even during the cool typhoon periods and that they may be

made to appear and disappear by discontinuing and renewing the mango feeding, it can be concluded that the etiology of these rashes is to be ascribed to the fruit itself.

The rash observed on the mother after mango eating is of the papulovesicular type with small papules and vesicles. These are characterized by more or less persistence of the lesions, marked itching, and absence of other subjective symptoms. The size of the papules and vesicles varies from that of a pinhead to about 2 millimeters in diameter. They are round or sometimes oval in shape, and appear in patches. The rash must be classed as an erythema and not as urticaria. The commonest places for the rash to develop are on the mammary regions, the neck, and the extensor surfaces of the upper extremities. The eruptions found on the baby are generally of the maculopapular type. In some instances, the papulovesicular type can also be found. They appear usually either singly or in patches. Their shape is circular, and they are comparatively larger than those found on the mother. The lesions are also less persistent, as compared to those in the mother, and are less irritating. They generally develop on the face, the neck, and the extensor surfaces of the extremities and not infrequently on the back.

Other points of interest in connection with these observations may be mentioned. In all of the above cases, except one (case II), rashes were produced in both mother and child; this exception indicates that individual susceptibility is a factor in the development of the rash. After successive days of feeding, the mother may acquire some degree of immunity or tolerance, as shown by case III, in which renewal of the mango feeding failed to produce a second rash. The rashes have appeared on the babies whenever mangos were given to the mothers. The babies, therefore, seem to be more susceptible than are the adults.

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