Star health

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Green banana prevents severe diarrhoea

Mothers feeding their babies prepared green banana

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NAIMUL HAQ

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Dr Golam Hasan Rabbani, a scientist at the international centre for diarrhoeal disease and research, Bangladesh (ICDDR,B) has already published his research findings in the journal - **Gastroenterology** published by the American Gastroenterology Association in its September 2001 issue. Dr Rabbani made these interesting observations while carrying out a double-blind, randomised trial involving 200 children aged between 1 and 2 years old.

Dr G H Rabbani

To explore this important observation, Star Health Correspondent recently interviewed Dr Rabbani. The discussion is summarised below.

Star Health (SH): Dr Rabbani, we learnt about the important research finding that green banana is useful in treating children with diarrhea, can you please tell us the most important messages of your observations?

G H Rabbani (GHR): Thank you SH. We studied green banana (GB), locally called *Kancha kola* in the treatment of two types of diarrhoeas: one is called persistent diarrhoea lasting for more than 14 days without any improvement, and the other is called blood dysentery, or *rokto amasha* or Shigellosis. Green banana was equally effective in treatment of both types of diarrhoeas; green babana commonly found in the kitchen markets significantly reduced duration of illness, number of stools, blood and mucus in stool, and improved stool quality and severity of illness. Most children about 70-85 per cent treated with GB recovered from diarrhoea within two to four days.

Our study of GB in dysenteric children has been accepted for presentation in the upcoming conference of the American Gastroenterology Association to be held in USA, being held from May 19 - 22 this year.

SH: How did you come to know about GB that it would be useful for diarrhoea?

GHR: Green banana has been traditionally used in many communities in Asia and Africa, especially for treating digestive disorders. In Bangladesh, many people regularly use GB whenever anyone has diarrhoea. But this has never been tested scientifically before. Our research have established its scientific basis as an anti-diarrhoeal agent.

Both, persistent diarrhoea and dysentery are important causes of disease and deaths among children of the developing countries. Roughly 70 per cent children die from persistent diarrhoea in Bangladesh for which no useful or safe treatment is available. I think our observations would be useful to develop a treatment protocol for these conditions using a simple and cheap food item like GB.

SH: What do you think is the mechanism of antidiarrhoeal action of green banana?

GHR: Green banana has a special type of starch or carbohydrates which is not digestible in human small intestine. These undigested materials are broken down by colonic bacteria (in the colon in our intestine system) into fatty acids which absorb salt and water from the colon and prevents their loss in diarrhoeal stool. We have measured fatty acid contents in stool and found these to be significantly increased due to treatment with GB.

SH: In your study how did you feed green banana to children?

GHR: For the purpose of research, we mixed 250 grams (gm) of cooked GB with 10 gm of rice powder making into a thick suspension which was fed to children with spoon by their mothers. We procured locally available GB from the market. A liter of this rice-based banana gives 54 kilocalories of energy.

SH: Do you think mothers in the rural areas would be able to prepare this type of banana diet at home?

GHR: Yes. It is simple and this is nothing new. All we need is to inform mothers about the benefit of GB. It is not necessary to have an identical preparation as the one we prepared during our research. GB given in any form would work, it can be given as *varta, bora, chop, or curry,* depending on the age and food preference of the child.

SH: GB is has many different species grown in various regions. Would change in its type affect the desired benefit?

GHR: All types of natural green bananas have similar starch contents, there may be modest variations in chemical composition but the basic structure is the same. The type we have used is *Kancha kola*, a cooking type banana that is always cooked as a curry and taken as a side dish during main meals. Ripe banana, which is yellow and sweet, would not work because all its starch has been converted into sugar during the ripening process.

SH: Can you give green banana to patients of all ages?

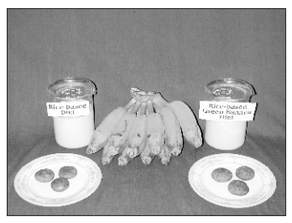
GHR: No, starches are not usually given to children less than 4 months old because their digestive capacity has not yet developed fully. Thus GB should be given to children more than 4 months old.

SH: At this stage of development, would you recommend green banana for general use?

GHR: Our studies have confirmed the anti-diarrhoeal effects of GB providing a scientific basis of its action in a group of children who were treated in a hospital. We do not know whether this treatment would be equally effective in a community level without having any major supervision. Now we need to study the acceptability, effectiveness, and socio-cultural response of GB as a dietary tool for home-management of diarrhoea and dysentery. Nevertheless, GB is a common fruit, easily available and eaten by people and it is not very expensive. These characteristics make GB an important tool for the home-management of diarrhoeal illnesses.

In view of this I am pleased to tell you that we are about to begin a large, community-based study in Mirsarai in Chittagong to assess its effectiveness in the community treatment of childhood diarrhoea. Once this is successfully evaluated, GB can be considered by the health authorities for programmatic implementation.

SH: Thank you Dr Rabbani for sharing your views with Star Health.



New medical device

Side view of cleantop

Cleantop is a device for cleaning and disinfecting primarily the tube of an endoscope machine. It is designed to completely remove any micro-organisms like bacteria and virus. Disinfecting is a common practice for safely removing any micro-organisms which may seriously infect one during an endoscopy if contaminated by germs. Medical scientists have developed this device to completely remove any germs that may be present during and after an endoscopy which performs to visually detect any abnormal development in the intestine, stomach and the esophagus.

The device is new to Bangladesh but widely used in the West. Except for a very few places most hospitals, clinics and diagnostic centres do not posses the device. The device cleanses using normal supply water to produce, through electrolysis, acid water, which is the active ingredient for disinfecting the main tube of the endoscope machine. It requires only ten litres of water, which is recycled for the device to do the job.

The device is designed to accommodate any model of endoscopes for cleaning and it takes only seven minutes to disinfect once the tube is inserted into the device. The device manufactured by a number of companies costs around Taka 5 lakh.

Top view of cleantop

Starhealth presents panel of doctors for medical advice for our readers

Dear readers,

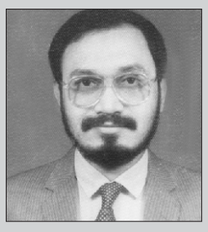
The Daily Star has taken an exciting initiative to provide further service to its readers. Knowing how difficult it is to reach some of our most renowned doctors we have obtained the consent of a panel of eminent physicians who will provide advice to our readers -FREE of CHARGE - who wish to seek medical advice for their ailments through the "Starhealth" page

Our panel of doctors will consist of specialists in the various fields. We invite our readers to send in their brief medical history and current description of their ailment. We will then send them to the appropriate specialist and publish the clinician's recommendations in this page published every Sunday. To safeguard your privacy we will not publish your case history or your name and address. We will only mention "The reader with .... complains" followed by the specialists advise.

Please note that our effort is a public service and should not be confused with a doctor's prescription given after an examination by a doctor. Advise given in this page should be verified by the patient's own physician before any medication is taken or treatment undertaken. We will not be liable for any consequences resulting from the advice given in this column. Readers please NOTE our effort is to assist you in seeking proper medical treatment and NOT TO REPLACE the work your own doctor.

As we go along we would include more physicians in our panel of doctors.

Dr Mohammad Afzal Hossain - Neurosurgery



Dr Md Saiful Islam - Pediatric Surgery and Urology

Dr Deen Mohammad Noorul Huq - Eye and Phaco Surgery

Dr S L Sen - Plastic and Reconstructive Surgery

Dr Nazmun Nahar - Medical Imaging

Dr M Fakhrul Islam - Urology

Dr M Idris Ali - Orthopedic and Spinal Surgeon

Dr Anisur Rahman - General and Laperoscopic Surgery

Dr Isteak Ahmed - Urology and Andrology

Dr Rezaul Murshed - Eye and Glaucoma

Dr Mohammad Safiuddin - Heart and Chest Problem

Dr Kaniz Mawla - Internal Medicine

Dr Yasmin H Ahmed - Reproductive health

Dr Rubaiul Murshed - Pediatric Surgeon