ICDDR Library

ETHICAL REVIEW COMMITTEE, ICDDR,B

Date _____

Principal Investigator J Clemens

Application No. 84-038P

Title of Study Evaluation of Benefits of Breast-feeding for severity of pathogen-specific diarrhoea at ICDDR,B

Trainee Investigator (if any) 9

Supporting Agency (if Non-ICDDR,B) _____

Project status:
( ) New Study
( ) Continuation with change
( ) No change (do not fill out rest of form)

Circle the appropriate answer to each of the following (If Not Applicable write NA).

1. Source of Population:
   (a) Ill subjects — (Yes) No
   (b) Non-ill subjects — Yes (No)
   (c) Minors or persons under guardianship — (Yes) No
   (Retrospective Surveillance Only)
2. Does the study involve:
   (a) Physical risks to the subjects — Yes (No)
   (b) Social Risks — Yes (No)
   (c) Psychological risks to subjects — Yes (No)
   (d) Discomfort to subjects — Yes (No)
   (e) Invasion of privacy — Yes (No)
   (f) Disclosure of information damaging to subject or others — Yes (No)
3. Does the study involve:
   (a) Use of records, (hospital, medical, death, birth or other) — (Yes) No
   (b) Use of fetal tissue or abortus — Yes (No)
   (c) Use of organs or body fluids — Yes (No)
4. Are subjects clearly informed about:
   (a) Nature and purposes of study — (Yes) No
   (b) Procedures to be followed including alternatives used — (Yes) No
   (c) Physical risks — (Yes) No
   (d) Sensitive questions — (Yes) No
   (e) Benefits to be derived — (Yes) No
   (f) Right to refuse to participate or to withdraw from study — (Yes) No
   (g) Confidential handling of data — (Yes) No
   (h) Compensation &/or treatment where there are risks or privacy is involved in any particular procedure — (Yes) No

   As part of surveillance protocol

5. Will signed consent form be required:
   (a) From subjects — Yes (No)
   (b) From parent or guardian (if subjects are minors) — Yes (No)
6. Will precautions be taken to protect anonymity of subjects — (Yes) No
7. Check documents being submitted herewith to Committee:
   ___ Umbrella proposal - Initially submit an overview (all other requirements will be submitted with individual studies).
   ✓ Protocol (Required)
   ___ Abstract Summary (Required)
   X Statement given or read to subjects on nature of study, risks, types of questions to be asked, and right to refuse to participate or withdraw (Required)
   ___ Informed consent form for subjects
   ___ Informed consent form for parent or guardian
   ___ Procedure for maintaining confidentiality
   ___ Questionnaire or interview schedule *

* If the final instrument is not completed prior to review, the following information should be included in the abstract summary:
1. A description of the areas to be covered in the questionnaire or interview which could be considered either sensitive or which would constitute an invasion of privacy.
2. Examples of the type of specific questions to be asked in the sensitive areas.
3. An indication as to when the questionnaire will be presented to the Cttee. for review.

* Not necessary - This is a retrospective study.

We agree to obtain approval of the Ethical Review Committee for any changes involving the rights and welfare of subjects before making such change.

John Clemens MD
Principal Investigator

Trainee

16 SEP 1984

84-0387

22/8/84

SECTION I - RESEARCH PROTOCOL (PILOT)

1. Title: Evaluation of the Effect of Breast-feeding Upon the Severity of Pathogen-Specific Diarrhoea at ICDDR,B.

2. Principal Investigator: John D. Clemens

   Co-Investigators: N. Shahid and B. Stanton

3. Starting Date: September, 1984

4. Completion Date: March, 1985

5. Total Direct Cost: US$1700.00

6. Scientific Program Head:

   This protocol has been approved by the Disease Transmission Working Group.

   Signature of Scientific Program Head: Daniel A Sack

   Date: 16 August 1984

7. Abstract Summary

Despite the plethora of data relating the protective effect of breast-feeding (BF) against infection, title is known about the role of BF in reducing the severity of infection, or about the effects of BF against diarrhoea due to specific pathogens. Using a case-control approach, with the cases defined as severely ill patients and the controls defined as non-severely ill patients, we will examine protection due to breast-feeding against rotavirus, Campylobacter, and ETEC in patients 0-35 months of age who have been included in the hospital surveillance program of ICDDR,B between January 1, 1980, and January 1, 1983.

8. Reviewers:

(a) Research Involving Human Subjects: _____

(b) Research Review Committee: _____

(c) Director: _____

SECTION II - RESEARCH PLAN

A. INTRODUCTION:

Little is known about the role of breast-feeding in reducing the severity of diarrhoea. What little data that does exist suggests that diarrhoea hospitalization and mortality are reduced (1-6). However, these studies are, in large part antiquated (5 of 6 were conducted before 1940), they have not addressed protection against specific pathogens, and they have not examined protection beyond two years of age -- although 20% or more of Bangladeshi women breast-feed to 35 months of age.

In this study, we plan to use the ICDDR,B hospital surveillance data to examine the possibility that breast-feeding does reduce the severity of diarrhoea due to specific pathogens. In one preliminary case-control analysis, we have found that in diarrhoea due to Shigella, breast-feeding does indeed reduce the severity of diarrhoea, and importantly this protection extends well beyond infancy and even to 35 months of age. We now propose to evaluate the effect of breast-feeding for the following additional pathogens which are common in young children: Campylobacter, rotavirus, and ETEC.

Methods:

a. General

The analyses will be conducted using the case-control technique. For each pathogen, cases will be severely ill patients with the pathogen, and controls will be non-severely patients with the pathogen. Antecendent breast feeding histories in the two groups will be compared to assess protection.

b. Overall Eligibility

For each analysis, cases and controls will be selected from those patients in the Surveillance Program who were 0-35 months of age at presentation between 1980-82 and in whom the pathogen of interest was the only pathogen isolated. Candidate "pathogens" for this purpose will include Shigella, Salmonella, ETEC, Campylobacter, V. cholerae, rotavirus, E. histolytica (trophozoites), and Giardia (trophozoites).

c. Cases

Cases will be defined as patients who were hospitalized, who died, or who had one or more of the following manifestations at the time of presentation: temperature $\geq 102^{\circ}F$, severe neurologic manifestations (coma, seizuires), or severe dehydration.

d. Controls

Controls will be patients lacking any of the criteria for defining cases.

e. Breast-feeding Histories and Other Pertinent Data

This information is routinely acquired at the time of presentation in the Surveillance Program.

f. Analyses

For patients infected with each pathogen, the odds ratio relating breast-feeding to severity will be calculated. It can be shown

that this odds ratio reflects the reduction in severe disease, relative to the overall reduction of diarrhoea due to each pathogen. Thus, the odds ratio reflects the change in the spectrum of disease severity due to each pathogen. To rule out confounding bias, the odds ratios will be adjusted for age, gender, family size and income, nutritional status and other potential confounding variables. This adjustment will be performed using standard Mantel Haenzel technique for single confounders, and logistic regression to examine joint confounding by several variables. In addition, subgroup analyses will be performed to examine whether any factors modulate the degree of protection by breast-feeding; statistical distinctiveness of the subgroups will be evaluated using second order interaction terms in logistic models.

g. Significance

Reduction of disease severity by breast-feeding is an important yet little researched possibility. Our preliminary work suggests a prolonged beneficial effect in this regard against shigellosis. The present study will extend these observations to other common pathogens. The results will be of considerable importance to public health planners in comtemplating recommendations for breast-feeding in developing countries.

Abstract Summary

1. Study Population:

The ICDDR,B Surveillance population seen between 1980-82 will be used.

2. Risks

None

3. Not relevant

4. Confidentiality

Confidentiality is already preserved in the Surveillance Program, which has been approved by the ERC and RRC.

5. Not relevant

6. No interview will be involved.

7. Benefits include an improved understanding of the protection conferred by breast-feeding against specific diarrhoeal pathogens.

8. Surveillance records will be used. No other specimens will be used.

BUDGET

		Requirements (Dollars)
1.	Personnel	0
2.	Supplies	
	Office supplies and xeroxing	$100
3.	Equipment	0
4 & 5.	Hospitalization, Outpatient Care	0
6.	Transport - ICDDR,B	0
7 & 8.	Transport of Things	0
9.	Rent	0
10.	Printing	0
11.	Other Contractual Time	
	Programming	$800
	Computer time (100 hours)	$800
	Total:	$1700