

THE ASSOCIATION OF FAILURE TO THRIVE (FTT), MATERNAL-INFANT SOCIO-BEHAVIORAL FACTORS, AND FEEDING PATTERNS IN ISRAEL

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Introduction

Definition

Failure to thrive (FTT), is defined as weight for age <5th percentile and/or growth decline of 2 STD in the first 2 years of life.

FTT infants are at risk for significant health and mental problems:

- obesity in the late childhood
- greater incidence of infectious diseases
- learning problems at school age, impaired I.Q., and lower educational achievements



Objectives

To examine the association between non-organic FTT and

- > Biological factors
- > Socio-behavioral aspects of mother-infant relationship, particularly feeding and eating patterns

Methods

Study design

Case-control study

Setting

A local pediatric clinic of the largest HMO in Israel (Clalit Health Services) providing preventive, well baby follow-up, and curative care

Study population

Cases (57 mother-FTT infant dyads)
 Controls (110 dyads of mother-non FTT infants) matched for age, were selected from the same clinic (n=167)

Inclusion /exclusion criteria

- Singletons, 6-24 months old, full term, born after 37 gestational weeks, and birth weight above 2500 gr
- Only Hebrew speaking mothers
- No chronic disease that can affect weight

Data collection

Interviews: All mothers were interviewed by the same nurse, using a structured questionnaire.

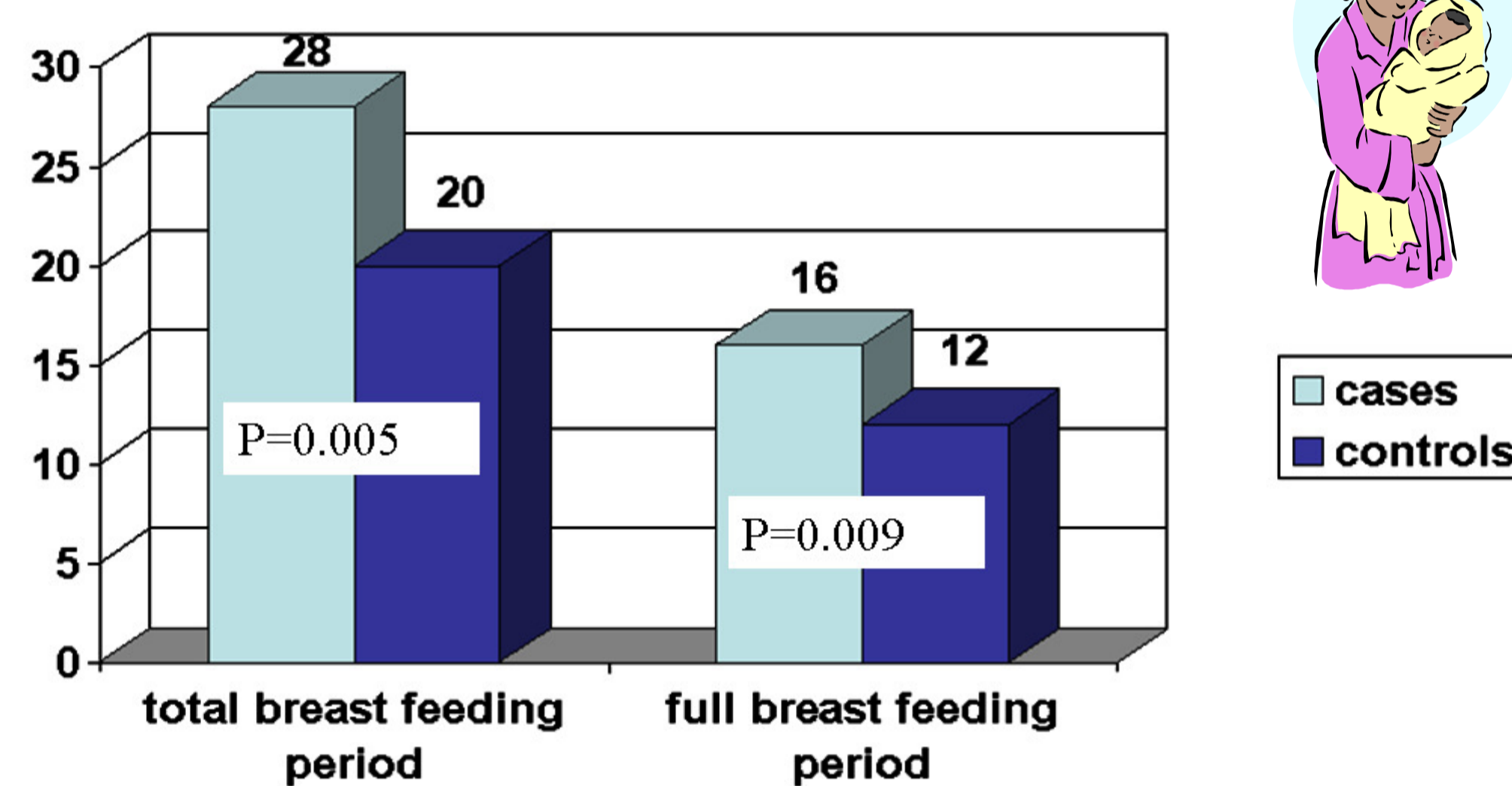
Medical information: Abstracted from charts and medical-nursing files.

Results

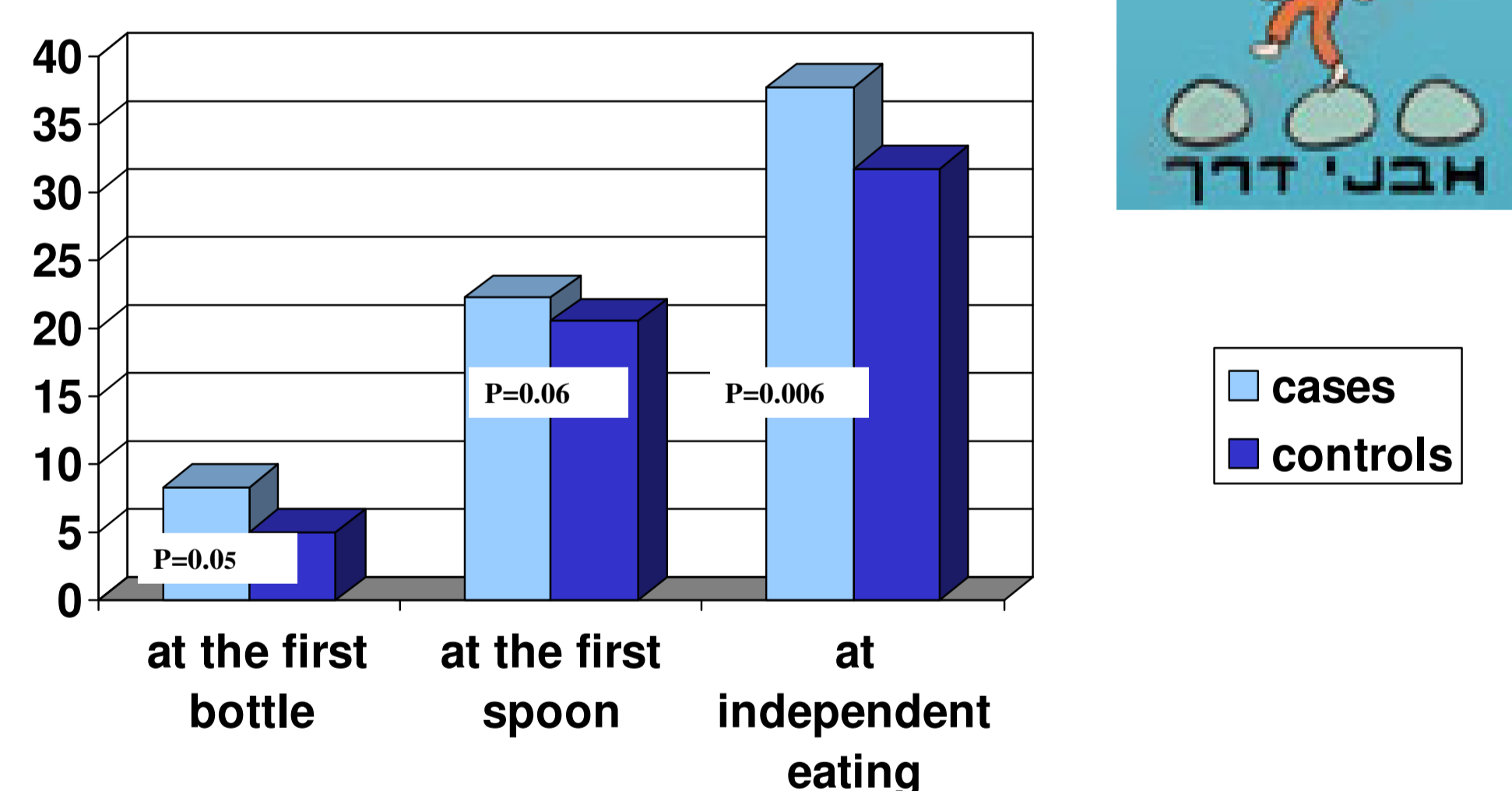
Birthweight in cases and controls

	N	Mean	S.D.	p value (t test)
Cases	57	2979	343	0.013
Controls	110	3143	428	

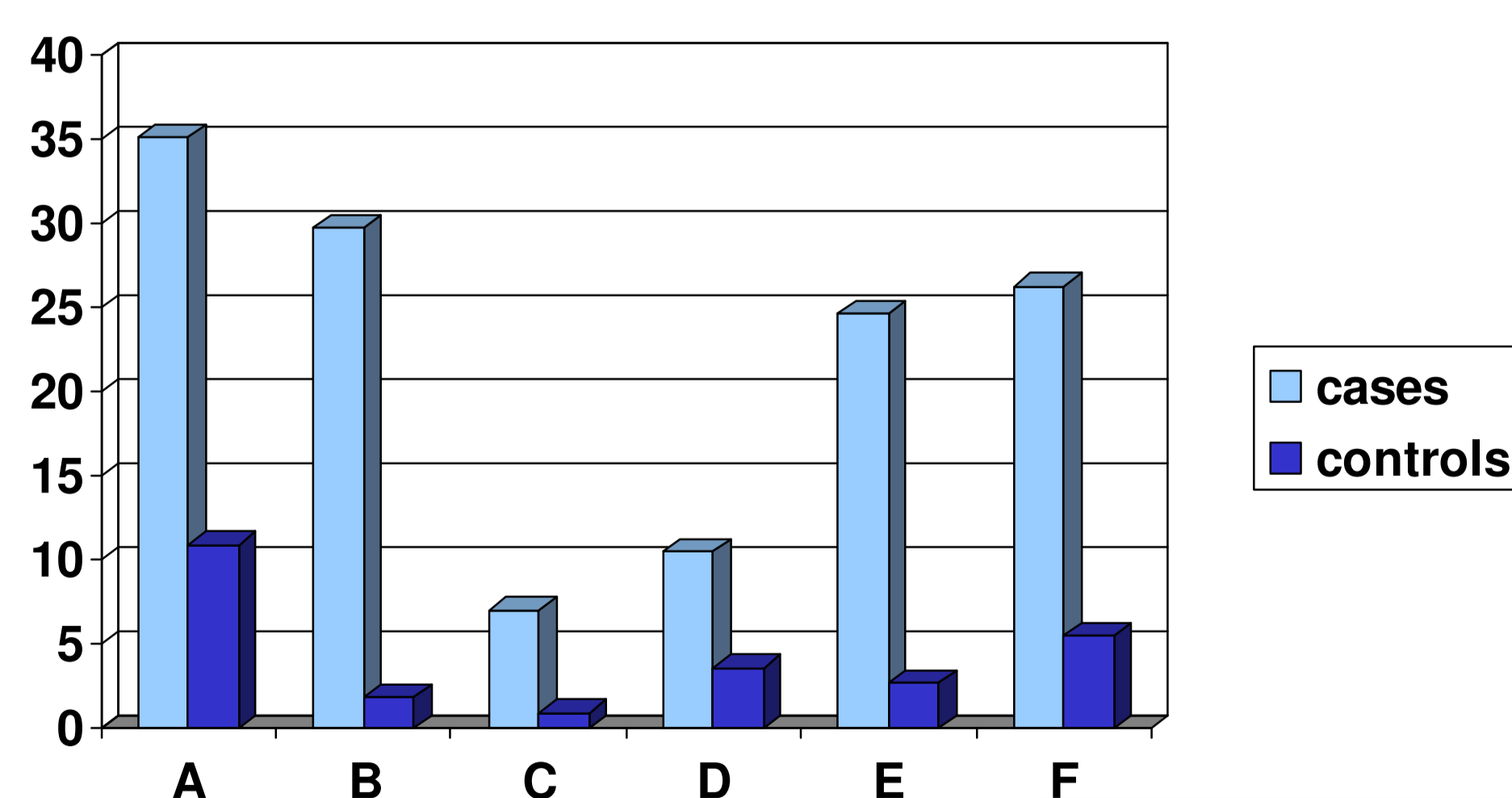
Length of breast feeding period (weeks)



Feeding/eating milestones (weeks)



Difficulties* in adjusting to new eating techniques and food textures (%)



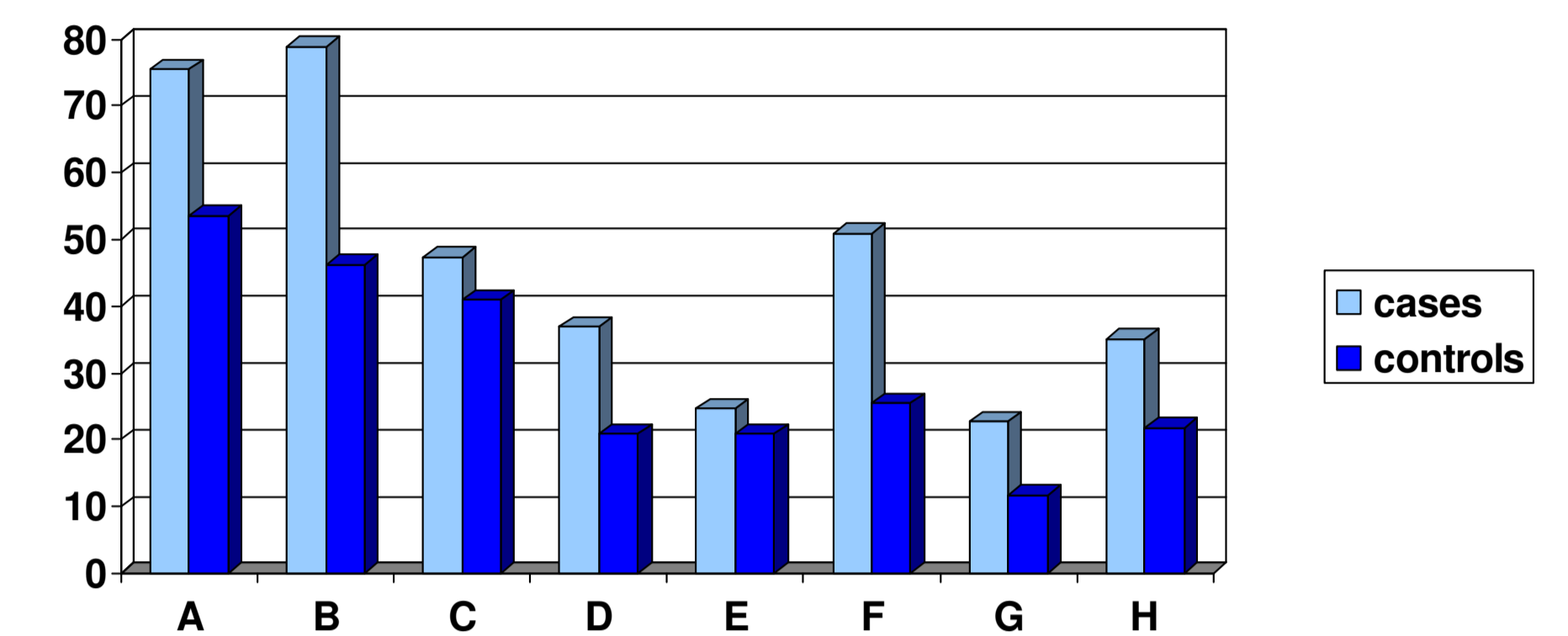
- A. Breastfeeding to bottle
- B. Bottle to spoon
- C. Spoon to independent eating
- D. Liquid to puree
- E. Puree to mashed food
- F. Mashed food to solid



*difficulty is defined as failed daily attempts with the new technique/texture for more than two weeks

Results (Cont.)

Patterns of refusal to eat (%)



- A. Eats small quantities
- B. Closes mouth/pushes plate
- C. Eats slowly
- D. Chews, does not swallow, spits food
- E. Vomits and chokes
- F. Picky eater
- G. Hard to adjust to fixed meal schedule
- H. Refuses to eat the right food

Mother-baby quality time (hours/day)

	n	Mean	S.D.	p value (Mann Whitney)
Cases	57	1.67	1.39	0.007
Control	110	2.26	1.34	

Conclusions and recommendations

Prolonged breast feeding, eating-feeding difficulties, and birthweight <3 kg, combined with less familial and social support are risk factors for non-organic FTT.

It is recommended

1. To consider the possibility of referring infants with an ongoing non-organic FTT to special infant eating disorders clinics
2. To update and develop an educational program for nurses and for mothers of young infants and children which addresses eating and feeding problems.

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