

Incidence of microbial growth from the tip of the embryo transfer catheter
after embryo transfer in relation to clinical pregnancy rate
following in-vitro fertilization and embryo transfer.

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=Abstract=

This study was performed prospectively at the time of transcervical embryo transfer following conventional in-vitro fertilization and intracytoplasmic sperm injection procedures. Sixty three patients were enrolled in this study. Microbiological cultures were performed on endocervical swabs and embryo transfer catheter tips. Positive microbial growths were observed from endocervical swabs in 45(71.4%) women and from catheter tips in 30(47.6%) women. There was no statistically significant difference seen in the mean number of oocytes fertilized or number and grade of embryos transferred between the group of patients without growth and the group of patients with positive microbial growth from catheter tips. The clinical pregnancy rate were 30.3% in the group of patients without growth and 13.3% in the group with positive microbial growth from catheter tips. This difference in clinical pregnancy rates was statistically significant. Our finding is that microbial contamination at embryo transfer may influence implantation rates. The major questions arising from our finding are whether eradication of endocervical micro-organisms is possible and whether their eradication will improve implantation rates.

Key Words : embryo transfer, endocervical organisms, transfer catheter

60-70% (Van Steirteghem et al., 1993; Payne et al., 1994). (Plachot et al., 1988). 가 가 12-15% (Edwards and Brody, 1995), (receptivity) 가 (hysterosalpingography) 가, Mark Paulson(1992)

가

1.

1996 1 1997 12

63

2.

Decapeptyl(D-Trip-6-LH, Fering, Sweden) 0.1mg
3

3 HMG FSH

5

3 가

16mm hCG(Profasi; Serono Laboratories) 10,000 IU

34-36

48

Progesterone 50mg 2

endocervical swab

(catheter)

1cm 가

Endocervical

swab

2 5가

: (1) 5% horse blood agar; (2) MacConkey's bile salt agar; (3)

Sabouraud's glucose-peptone agar; (4) 0.0075% neomycin blood agar; (5) tomato juice agar.

37oC 48 가

10

(Corbishley, 1977).

unpaired t-test

2 test

5%

P<0.05

63 endocervical swab 45 (71.4%) ,
 30 (47.6%) 가 . endocervical swab 가
 33 (52.6%) 가
 15 (45.5%) endocervical swab 가 . endocervical swab
 45 18

Table I

(group B)
 A) 32.0 ± 2.8 (group B) 가 . ,
 가 (Table II).
 (group A)
 32.7 ± 4.0 (group
 (30.3% vs
 13.3%; $P < 0.05$)(Table III).

1993). (Peters et al.,

가
가

가

가

1. 63 endocervical swab 45 (71.4%) ,
30 (47.6%) 가

2. , ,
(30.3% vs 13.3%; $P < 0.05$).

가

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Table I. Microbial organisms isolated from endocervical swabs and embryo transfer catheter tips (N=63)

Microbial organisms isolated	Endocervical swabs	Embryo transfer catheter tips
E-coli	11	9
Lactobacillus	8	-
Enterococcus faecalis	8	6
-streptococcus group B	6	4
-streptococcus	4	3
Pseudomonas aeruginosa	3	3
Gardenerella vaginalis	3	-
Morgagni morganii	3	-
Staphylococcus sp. (coag.-)	1	5

Total number of isolates 47a 30

a In 2 cases two organisms were isolated.

Table II. Indications for in-vitro fertilization embryo transfer

	Group A (n=33)	Group B (n=30)
Tubal infertility	25 (75.8)	24 (80)
Anovulatory infertility	8 (9.1)	3 (10)
Male infertility ^a	3 (9.1)	3 (10)
Unexplained infertility	2 (6.1)	-

Values in parentheses are percentages.

Group A : no growth from catheter tips (n=33)

Group B : positive microbial growth from catheter tips (n=30)

aICSI cases

Table III. Number of oocytes fertilized, number and grade of embryos transferred and the clinical pregnancy rate per transfer

	Group A (n=33)	Group B (n=30)	P-value
No. of oocytes fertilized	4.5c	4.9c	NSa
No. of embryos transferred	3.5 ± 0.7d	3.8 ± 1.3d	NSa
Grade of embryos transferred	1.2 ± 0.4d	1.3 ± 0.1d	NSa
Clinical pregnancy rate/transfer	10 (30.3)	4 (13.3)	< 0.05b

Values in parentheses are percentages.

Group A : no growth from catheter tips (n=33)

Group B : positive microbial growth from catheter tips (n=30)

aNS = not significant, unpaired t-test

b 2 test

cData are means.

dData are means ± SD.