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Table (1): comparison between PGD and sperm sorting for sex selection [11].

	PGD	Sperm sorting
Invasiveness	Highly invasive - requires women to undergo IVF treatment involving intensive hormone treatment and extraction of eggs.	Requires only the collection of a sperm sample from the man, followed by artificial insemination.
Ethical issues	Ethical issues arise over the fate of unneeded embryos.	Only sperm are manipulated in the laboratory
Pregnancy rate	~20% per cycle.	~16-25% per cycle
Reliability	Nearly all pregnancies are with a child of the desired sex.	A child of the desired sex is produced in 70- 90% of pregnancies.
Safety	Insufficient number of births to draw statistically significant conclusions on safety.	Insufficient number of births to draw statistically significant conclusions on safety
Cost	From £4000.	UK clinics charge £4000. Fees in the US are much lower – starting from ~£360

Table (2) comparison between the two studied groups as regards; Age, total number of embryos and fertilization rate.

	Group A (n = 94)	Group B (n = 38)	U	P
Age				
Min. – Max.	26.0 – 37.0	21.0 – 39.0		
Mean ± SD.	31.35 ± 3.70	28.50 ± 5.28	t=1.977	0.055
Median	31.50	28.0		
M2 Oocytes				
Min. – Max.	2.0 – 31.0	3.0 – 25.0		
Mean ± SD.	10.57 ± 6.23	13.11 ± 6.01	1290.0*	0.012*
Median (IQR)	9.0 (6.0 – 14.0)	11.0 (8.0 – 19.0)		
Embryo				
Min. – Max.	2.0 – 10.0	2.0 – 14.0		
Mean ± SD.	5.26 ± 2.17	6.16 ± 2.76	1404.0	0.052
Median (IQR)	5.0 (4.0 – 7.0)	6.0 (5.0 – 7.0)		
Fertilization rate%				
Min. – Max.	18.75 – 100.0	11.76 – 100.0		
Mean ± SD.	57.45 ± 20.26	52.46 ± 19.28	1558.0	0.251
Median (IQR)	57.14 (42.11 – 66.7)	52.63 (40.0 – 62.5)		

U: Mann Whitney test, IQR: Inter quartile range, SD: Standard deviation p: p value for comparing between Group **A** and **B**

*: Statistically significant at $p \leq 0.05$

Table (3) comparison between the two studied groups as regards embryonic parameters.

Embryos	Group A (n=494)	Group B (n=234)	Total (n=728)	χ^2	P value	χ^2 : Chi square test
Males	184 (37.2%)	76 (32.5%)	260 (35.7%)	1.572	0.210	
Females	116 (23.5%)	74 (31.6%)	190 (26.1%)	5.458*	0.019*	p: p value for comparing between the studied groups
Non-conclusive	194 (39.3%)	84 (35.9%)	278 (38.1%)	0.766	0.382	
Transfer	152 (30.8%)	72 (30.8%)	224 (30.8%)	0.000	1.000	
Cryopreservation	32 (6.5%)	4 (1.7)	36 (4.9%)	7.681*	0.006*	*: Statistically significant at $p \leq 0.05$

Table (4): Comparison between the two studied groups according to number and percentage of embryos for the two studied groups

All cases	Group A (slow) (n = 94)	Group B (progressive) (n = 38)	U	p
Male				
Min. – Max.	0.0 – 6.0	0.0 – 4.0		
Mean ± SD.	1.96 ± 1.39	2.0 ± 0.93	1636.0	0.434
Median (IQR)	2.0 (1.0 – 3.0)	2.0 (1.0 – 3.0)		
% Males/embryo				
Min. – Max.	0.0 – 75.0	0.0 – 66.70		
Mean ± SD.	36.29 ± 20.82	33.99 ± 15.30	1634.0	0.442
Median (IQR)	37.50 (25.0 – 50.0)	33.30 (21.4 – 40.0)		
Female				
Min. – Max.	0.0 – 5.0	0.0 – 8.0		
Mean ± SD.	1.23 ± 1.30	1.95 ± 1.90	1372.0*	0.031*
Median (IQR)	1.0 (0.0 – 2.0)	2.0 (1.0 – 2.0)		
% Females/embryo				
Min. – Max.	0.0 – 80.0	0.0 – 66.70		
Mean ± SD.	22.78 ± 22.73	30.25 ± 20.45	1372.0*	0.031*
Median (IQR)	20.0 (0.0 – 37.5)	33.30 (14.3 – 50.0)		
Difference between males and females				
Min. – Max.	-5.0 – 5.0	-5.0 – 3.0		
Mean ± SD.	0.72 ± 2.03	0.05 ± 1.84	1430.0	0.069
Median (IQR)	1.0 (0.0 – 2.0)	0.0 (-1.0 – 1.0)		

U: Mann Whitney test, IQR: Inter quartile range, SD: Standard deviation p: p value for comparing between Group A and B, *: Statistically significant at $p \leq 0.05$

Table (5) comparison between the two studied groups as regards: transfer rate, cancellation rate, cryopreservation and pregnancy rate.

case	Group A (n=94)	Group B (n=38)	Total (n=132)	χ^2	P value	χ^2 : Chi square test
Transfer	84/94 (89.4%)	38/38 (100%)	122/132 (92.4%)	4.374	^{FE} p=0.062	
Cancellation	10/94 (10.6%)	0/38 (0.0%)	10/132 (7.6%)	4.374	^{FE} p=0.062	Fisher Exact
Cryopreservation	12/94 (12.8%)	2/38 (5.3%)	14/132 (10.6%)	1.607	^{FE} p=0.349	p: p value for comparing between the studied groups
Pregnancy	36/84 (42.9%)	12/38 (31.6%)	48/122 (39.3%)	1.395	0.238	

FE:

*:

Statistically significant at $p \leq 0.05$

Figure (1) distribution of male /female /non-conclusive embryos in group A.

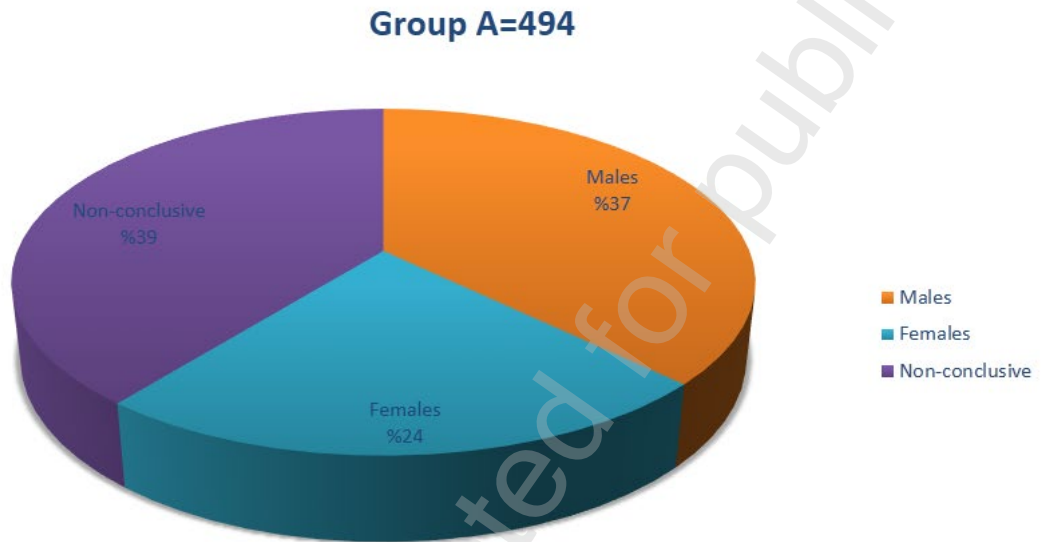


Figure (2) distribution of male /female /non-conclusive embryos in group B.

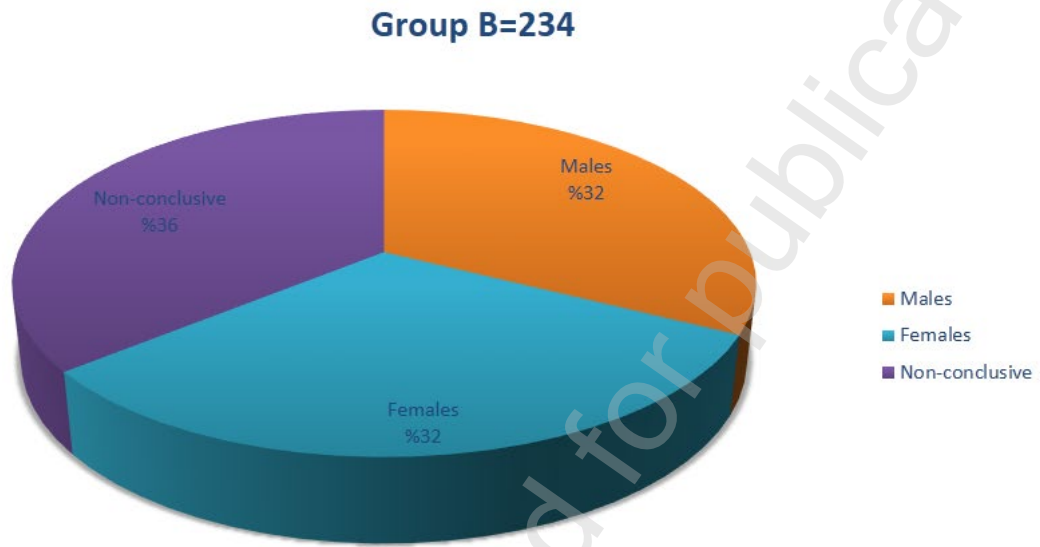


Figure (3) diagrammatic distribution of male /female /non-conclusive embryos in both groups.

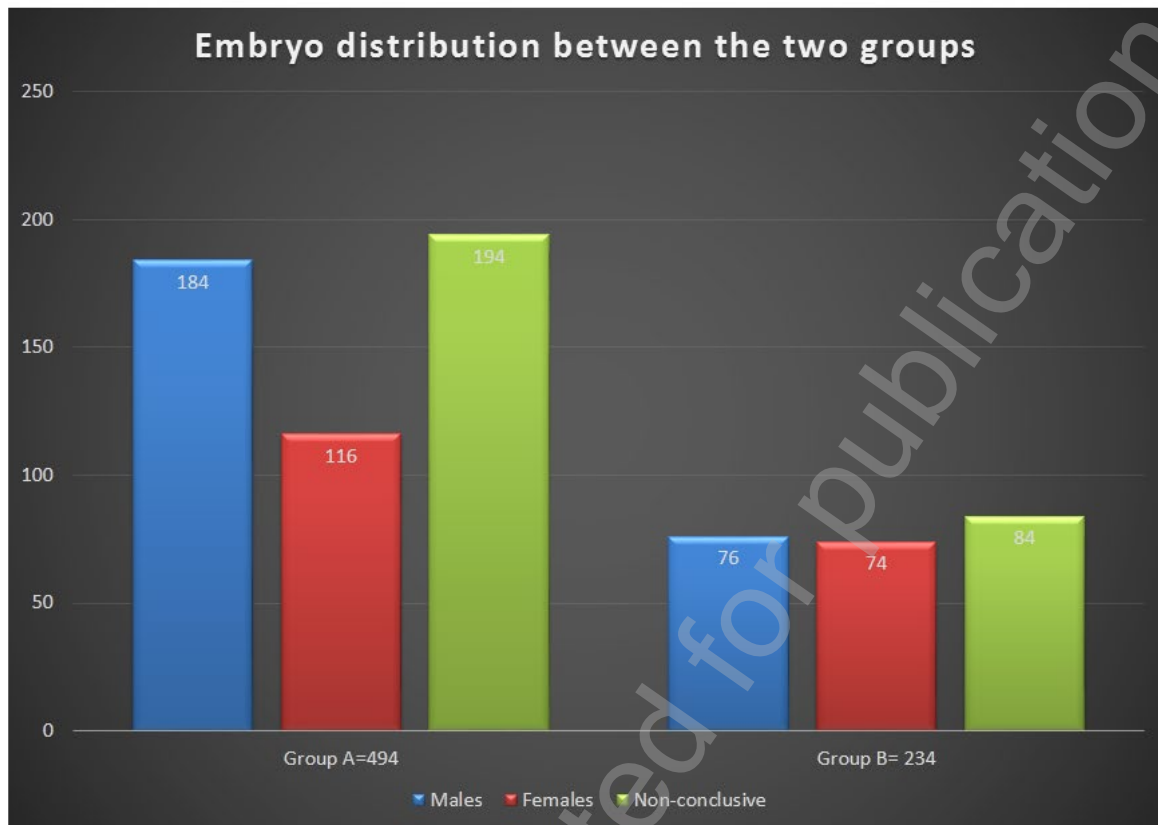


Figure (4): Comparison between the two studied groups according to difference between males and females for all cases.

