

1 Table 1 Karyotype of female with X chromosome mosaicism (X group)

Group	Karyotype	case number
X1	45,X/46,XX	41
X2	47,XXX/46,XX	22
X3	45,X/47,XXX/46,XX	12
	45,X/47,XXX/48,XXXX/46,XX	1
X group	all above	76

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Table 2 Baseline of X group and control group

Index	X group (n=76)	Control group (n=76)	P
Female age(ys)	34.0(33.0,37.8)	33.0(30.0,38.0)	0.138
Primary/secondary infertility	41/35	37/39	0.516
Median of infertility duration(ys)	2.00(2.00,4.00)	3.00(2.00,4.00)	0.131
Ovarian stimulation protocol			0.676
IVF/ICSI	56/18 ^s	53/21 ^s	0.576
height(cm)	161.5(158.0,165.0)	161.6±0.6	0.969
BMI	21.69±2.88	22.52±3.04	0.087
bFSH	7.00(5.89,8.93)	6.72(5.36,8.33)	0.174
Times of gestation			0.966
Times of pregnancy loss			0.269

6 ^s 2 cases from X group got no oocyte. 2 cases from control group got no oocyte.

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Table 3 IVF/ICSI outcomes of X group and control group

Index	X group (n=76)	Control group (n=76)	P
Gn days	9(8,11)	10(8,11)	0.940
Gn dosage	1800(1350,2475)	1612(1200,2025)	0.028*
E2 on trigger day	2104(1101,2843)	1868(851,2856)	0.748
Follicular number during oocyte retrieval	11(5,15)	10.5(6.0,20.8)	0.488
Average oocyte number	7.5±5.5	6.0(2.3,11.0)	0.655
Average fertilized oocyte number	4.0(3.0,6.0)	4.0(2.3,9.0)	0.450
Fertilization rate(%)	400/570(70.18)	448/609(73.56)	0.196
Average normal fertilized oocyte number	3(1,4)	3(2,5)	0.274
Normal fertilization rate(%)	267/570(46.84)	320/609(52.55)	0.050
Average cleavage number	4.0(2.0,6.0)	4.0(2.3,8.0)	0.250
Cleavage rate(%)	378/400(94.50)	433/448(96.65)	0.126
Average usable number	2.0(1.0,4.0)	2.0(1.0,4.0)	0.737
Utilization rate(%)	208/378(55.03)	215/433(49.65)	0.127
Fresh embryo transfer cycle(%)	40/76(52.63)	39/76(51.32)	0.871
Average ET number	2(1,2)	2(2,2)	0.604
Implantation rate(%)	24/64(37.5)	27/71(38.0)	0.950
Clinical pregnancy rate(%)	19/40(47.5)	19/39(48.72)	0.914
miscarriage rate before 12 weeks' gestation(%)	3/19(15.79)	3/19(15.79)	1.000 &
Cumulative live	28/76(36.84)	27/76(35.53)	0.866

birth rate (%)

- 1 * $P < 0.05$, the difference was considered statistically significant. & Fisher's exact test was used.
- 2 2 ectopic pregnant cases in control group were not included in IMP/CP. 2cases in X group were
- 3 ongoing pregnant.

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Table 4 Baseline of subgroups of X group

Index	X1	X2	X3	P
	(n=41)	(n=22)	(n=12)	
Female age(ys)	35.22±3.97	34.45±3.08	34.58±4.56	0.401
primary/secondary infertility	21/20	10/12	9/3	0.236
Median of infertility duration(ys)	3.00(1.75,4.00)	2.00(1.75,3.00)	2.00(1.25,4.50)	0.824
Ovarian stimulation protocol				0.952
IVF/ICSI	29/10 ^s	18/4	9/3	0.794
height(cm)	161.5±5.7	161.6±5.4	161.8±4.6	0.980
BMI	21.84±2.88	22.06±3.12	20.43±2.42	0.260
bFSH	7.51±2.59	7.10(5.87,8.78)	6.03(4.56,7.83)	0.358
Times of gestation				0.149
Times of pregnancy loss				0.366

2 Group X1=45,X/46,XX; Group X2=47,XXX/46,XX ; Group X3=45,X/47,XXX/46,XX.

3 ^s 2 cases from X1 got no oocyte. & Fisher's exact test was used.

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Table 5 IVF/ICSI outcomes of subgroups of X group

Index	X1	X2	X3	P
	(n=41)	(n=22)	(n=12)	
Gn days	9.0(8.0,11.0)	9.0(8.0,12.3)	9.50±1.78	0.954
Gn dosage	2065±1140	1838(1341,2419)	1853±606	0.919
E2 on trigger day	2032±1428	2081±1194	2709(1908,2907)	0.317
Follicular number during oocyte retrieval	8.68±4.83	13.86±8.71	17.00±9.22	0.003 [#]
Average oocyte number	5.0(3.0,9.0)	9.45±7.28	10.25±4.62	0.010 [#]
Average fertilized oocyte number	3.0(2.0,5.0)	5.0(3.0,10.0)	6.0(5.0,10.8)	0.003 [#]
Fertilization rate(%)	151/238(63.45)	158/208(75.96)	90/123(73.17)	0.011 ※
Average normal fertilized	2.0(1.0,4.0)	3.0(1.8,8.0)	4.67±2.81	0.075
Normal fertilization rate	112/238(47.06)	98/208(47.12)	56/123(45.53)	0.954
Average cleavage number	3.0(2.0,5.0)	3.5(2.8,10.0)	5.5(4.3,10.0)	0.009 [#]
Cleavage rate(%)	146/151(96.69)	144/158(91.14)	87/90(96.67)	0.060
Average usable number	2.0(1.0,3.0)	2.5(2.0,5.0)	2.0(2.0,3.8)	0.182
Utilization rate(%)	92/146(63.01)	79/144(54.86)	36/87(41.38)	0.004 [#]
Fresh embryo transfer cycle(%)	20/41(48.78)	14/22(63.64)	5/12(41.67)	0.391
Average ET number	0.0(0.0,2.0)	1.0(0.0,2.0)	0.0(0.0,1.8)	0.618
Implantation rate(%)	11/35(31.43)	9/22(40.91)	4/9(44.44)	0.383 ^{&}
Clinical pregnancy rate(%)	9/20(45)	6/14(42.86)	4/5(80)	0.299 ^{&}
miscarriage rate before 12 weeks'	3/9(33.33)	0/6(0)	0/4(0)	0.084 ^{&}

gestation(%)				
Cumulative live birth rate (%)	11/41(26.83)	10/22(45.45)	6/12(50)	0.082 ^{&}

Group X1=45,X/46,XX; Group X2=47,XXX/46,XX ; Group X3=45,X/47,XXX/46,XX.

P<0.0167, the difference was statistically significant between X1 and X3.

×P<0.0167, the difference was statistically significant between X1 and X2.

& Fisher's exact test was used.

Table 6 The Cumulative live birth rate (%) in subgroups with different 45,X cell ratio

ratio of 45,X cell	X1	X3
<5%	60(3/5)	75(3/4)
5%~10%	25.8(8/31)	66.6(2/3)
≥10%	0(0/4)	25(1/4)
sum	27.5(11/40)	54.5(6/11)

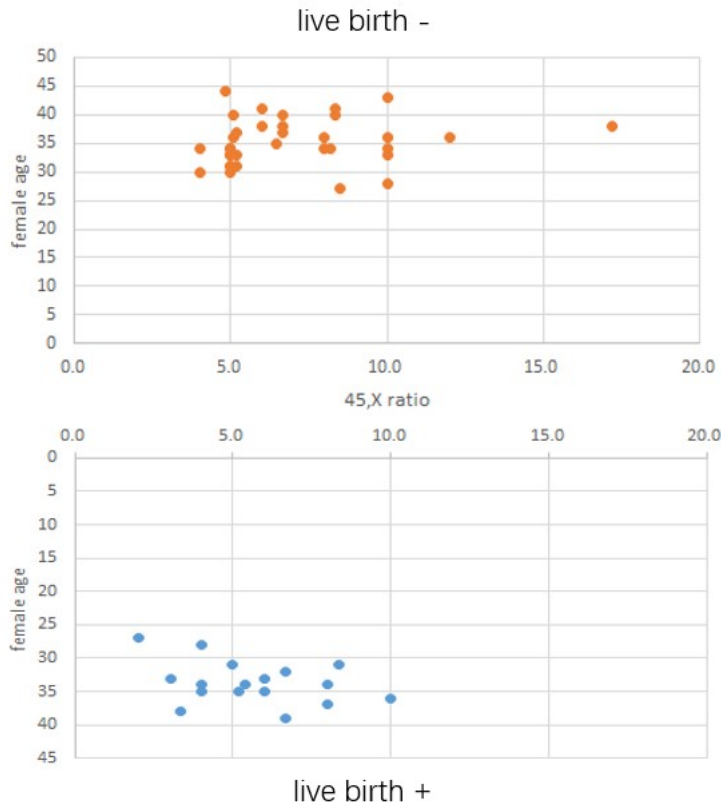


Figure1 Female age and 45,X cell ratio(from X1 and X3 subgroups) who got live birth or not