

Managing IVF cycles to minimise OHSS in a public hospital fertility clinic

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Aim

To compare rates of ovarian hyperstimulation syndrome related hospital admission between 2017-2019 and 2020-2022 and explore associated factors to look at how cycle management has changed during/after Covid aiming to minimise impact on a busy NHS hospital.

Background

During the covid pandemic, there has been enhanced focus on the importance of avoiding IVF associated medical risks and in particular, the risk of OHSS necessitating emergency inpatient admission, an arguably largely avoidable strain on overstretched NHS services.

During this time period, this clinic performed vast majority long agonist protocol cycles with a fixed day TVOR theatre operating list. Clinic policy changed in 2020 at the start of the Covid pandemic to reduce the mandatory freeze all embryos threshold from ≥ 25 eggs to ≥ 20 eggs collected.

Methods

Retrospective database review Jan 2017- Dec 2022 using electronic records (including inpatient discharge summaries), lab egg log documentation , OHSS admissions diary and inpatient admission discharge summaries.

Results		
2017-19	vs	2020-2022
Total cycles		
780		609
≥ 18 eggs collected		
14.61%		19.54%
≥ 20 eggs collected		
9.87%		14.78%
Freeze all rate		
3.08%		10.18%
OHSS related hospital admission		
1.54%		1.97%

Patients at high risk of OHSS

≥ 18 follicles at TVOR		≥ 18 eggs collected	
2017-	81 28.72%	2017-	40 14.18%
2018-	54 25.23%	2018-	29 13.55%
2019-	47 16.55%	2019-	45 15.85%
2020-	30 18.18%	2020-	19 11.52%
2021-	68 29.69%	2021-	52 22.7%
2022-	42 19.53%	2022-	48 22.34%

Freeze all embryo cycle characteristics

Year	n	Mean no eggs collected +/- s.d	Mean Age +/- s.d	Mean AMH +/- s.d	Mean GF starting dose +/- s.d	Mean no Frozen embryos +/- s.d
2017	7	24.57 +/- 8.89	30.28 +/-3.59	47.86 +/-20.73	203.57 +/- 36.60	11.86 +/- 7.80
2018	7	24.00 +/- 4.69	31.86 +/-2.91	34.86 +/- 11.51	235.71 +/- 28.35	8.71 +/- 3.45
2019	10	26.00 +/- 8.50	30.80 +/-2.53	64.30 +/-53.78	169.50 +/- 49.90	9.10 +/- 4.56
2020	15	22.27 +/- 5.90	32.36 +/- 3.79	56.93 +/-39.03	245.18 +/- 120.78	7.20 +/- 4.75
2021	24	24.92 +/- 6.53	31.17 +/- 3.68	47.00 +/-22.15	213.04 +/- 77.83	8.29 +/- 3.25
2022	23	27.48 +/- 8.93	31.91 +/- 4.48	52.23 +/-39.07	205.62 +/- 43.39	9.43 +/- 4.20

Conclusions

Despite a relatively high percentage of cycles with high egg numbers and a clinic set up necessitating majority long protocol cycles, this data shows cycles can be managed to maintain low rates of OHSS related hospital admission. There were no cycles leading to hospital admission for OHSS after a fresh embryo transfer. However, there are patient experience, cost and time to pregnancy downsides associated with high freeze all rates. The clinic has since moved to largely antagonist cycles, with a more flexible operating schedule and data monitoring is ongoing.