Sharing data and best practice within a group of clinics

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Contents

- CARE Fertility Group of 9 clinics
  - Structure and scientific function

- Examples and approaches to add-ons
  - Time lapse and the power of big data
  - PGT-A – Best practice process
  - Culture media e.g. Embryogen

- Monitoring results and KPI
Suggested benefits of time lapse imaging?

a. Quality and **quantity** of information
b. Consistency & objectivity
c. Clinical outcome improvements
   Some dispute!
d. Undisturbed, more stable, embryo culture
Time lapse RCTs increasing

‘Use of Time-lapse information to evaluate embryos improves outcomes’.

Some debate on quality of data within and design of these studies

How much weight can be given to first hand experience and huge data?

(OR: 1.56; CI = 1.30–1.88; P < 0.001; based on 1945 cases, intention-to-treat analysis;
Power of numbers – CARE example
Accuracy in fertilization assessment.

- At 18h post ICSI we will miss 1 in 25 without it!
- Large analysis of CARE wide data
  
  These would be scored as ‘unfertilized’ 0PN without time lapse

Where PNf was completed by 18 hpi, implantation rate was 35.2% (n=142)
50 babies!

Within the whole CARE reto-analysis cohort 6402 embryos were transferred, that have a known clinical outcome (+/-)
Power of numbers – CARE example relative improvements in birth rates

Retrospective analysis of 23,762 cycles highlights

Improvement in Live Birth

OR 1.19 with 95% CI 1.06 to 1.34

- 19% for <38 autologous
- 37% for >37 donor

OR 1.370; 95% CI 0.763 to 2.450

Article
Live births after embryo selection using morphokinetics versus conventional morphology: a retrospective analysis

Fishel et al., RBM Online 2017
CARE Fertility:
Data collection and scrutiny

- e.g. PGT-A
- Single lab SOP
- Focus Group
- Aspirational KPI
- ‘Broadshoulders’ comparisons
- Group and local results matrices
- Communication of changes and progress

Biopsy focus group update, June 2017

The focus update aims to disseminate the results of the biopsy focus group at CARE.

Key points:
- The biopsy team is conducting a biopsy study to evaluate the impact of PGT-A on pregnancy outcomes.
- The study involves the collection of biopsy specimens from patients undergoing PGT-A.
- The results of the study will be shared with the focus group members and will be discussed in future meetings.

Aspirational KPIs:
- Broadshoulders comparisons
- Group and local results matrices
- Communication of changes and progress

SOPs and Focus Groups:
- Single lab SOP
- Focus Group
- Aspirational KPI

CARE Fertility

Importantly, it is crucial to maintain a transparent and collaborative approach to data collection and analysis, ensuring that all changes and progress are documented and shared with the focus group members.

Communication of changes and progress:
- Group and local results matrices
- Aspirational KPIs
- ‘Broadshoulders’ comparisons

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CARE Fertility

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Quality assurance and analytics

- 27 biopsy practitioners
- Compared against each other
- Shared best practice
- Continuous improvement
- Aspirational targets
### Embryology Broad Shoulders Report Summary

| Embryologist | %2P N | %CP / ET | % Mature | % Survival | %2P N | %DEG | % DEG | % Other | % Bio/ET | % Act ETF | % DEG | % DEG | % Bio/ET | % Other | % DEG | % DEG | % Bio/ET | % Other | % DEG | % DEG | % Bio/ET | % Other | % DEG | % DEG | % Bio/ET | % Other | % DEG | % DEG | % Bio/ET | % Other | % DEG | % DEG | % Bio/ET | % Other | % DEG | % DEG | % Bio/ET | % Other | % DEG | % DEG | % Bio/ET | % Other | % DEG | % DEG | % Bio/ET | % Other |
|--------------|-------|----------|----------|------------|-------|------|------|--------|---------|----------|------|------|---------|--------|------|------|---------|--------|------|------|---------|--------|------|------|---------|--------|------|------|---------|--------|------|------|---------|--------|------|------|---------|--------|------|------|---------|--------|------|------|---------|--------|------|------|---------|--------|------|------|---------|--------|------|------|---------|--------|
| 1            | 57.64%| 42.11%   | 78.44%   | 60.98%     | 7.72% | 66.88%| 42.86%| 53.13% | 40.63%  | 95.08%   | 42.86%| 93.13%| 40.63%  | 93.13% | 40.63%| 93.13%| 40.63%  |
| 2            | 67.39%| 40.79%   | 79.41%   | 49.15%     | 81.08%| 54.29%| 76.32%| 36.00% | 59.00%  | 72.18%   | 52.24%| 59.00%| 54.29%  | 72.18% | 52.24%| 59.00%| 54.29%  |
| 3            | 62.56%| 20.00%   | 81.13%   | 40.79%     | 51.22%| 51.22%| 51.22%| 51.22% | 51.22%  | 51.22%   | 51.22%| 51.22%| 51.22%  | 51.22% | 51.22%| 51.22%| 51.22%  |
| 4            | 70.77%| 40.18%   | 82.76%   | 80.00%     | 81.22%| 40.18%| 76.32%| 36.00% | 59.00%  | 72.18%   | 52.24%| 59.00%| 54.29%  | 72.18% | 52.24%| 59.00%| 54.29%  |
| 5            | 71.51%| 52.11%   | 81.00%   | 40.79%     | 51.22%| 51.22%| 51.22%| 51.22% | 51.22%  | 51.22%   | 51.22%| 51.22%| 51.22%  | 51.22% | 51.22%| 51.22%| 51.22%  |
| 6            | 68.05%| 56.28%   | 80.00%   | 40.79%     | 51.22%| 51.22%| 51.22%| 51.22% | 51.22%  | 51.22%   | 51.22%| 51.22%| 51.22%  | 51.22% | 51.22%| 51.22%| 51.22%  |
| 7            | 65.81%| 35.47%   | 70.06%   | 40.79%     | 51.22%| 51.22%| 51.22%| 51.22% | 51.22%  | 51.22%   | 51.22%| 51.22%| 51.22%  | 51.22% | 51.22%| 51.22%| 51.22%  |
| 8            | 63.80%| 64.36%   | 81.00%   | 40.79%     | 51.22%| 51.22%| 51.22%| 51.22% | 51.22%  | 51.22%   | 51.22%| 51.22%| 51.22%  | 51.22% | 51.22%| 51.22%| 51.22%  |
| 9            | 69.47%| 41.07%   | 80.00%   | 40.79%     | 51.22%| 51.22%| 51.22%| 51.22% | 51.22%  | 51.22%   | 51.22%| 51.22%| 51.22%  | 51.22% | 51.22%| 51.22%| 51.22%  |
| 10           | 66.54%| 40.33%   | 70.06%   | 40.79%     | 51.22%| 51.22%| 51.22%| 51.22% | 51.22%  | 51.22%   | 51.22%| 51.22%| 51.22%  | 51.22% | 51.22%| 51.22%| 51.22%  |
| 11           | 60.41%| 50.71%   | 81.00%   | 51.22%     | 51.22%| 51.22%| 51.22%| 51.22% | 51.22%  | 51.22%   | 51.22%| 51.22%| 51.22%  | 51.22% | 51.22%| 51.22%| 51.22%  |
| Total        | 68.12%| 45.67%   | 79.33%   | 43.91%     | 45.88%| 30.30%| 70.38%| 37.14% | 67.79%  | 37.14%   | 67.79%| 37.14%| 67.79%  | 37.14% | 67.79%| 37.14%| 67.79%  |
Culture media add ons: What is best practice? Why & how do CARE offer them? e.g. EmbryoGen

✓ Scientific rationale considered:
  • Cytokines play a key role in reproduction
  • Up-regulation occurs during pregnancy
  • Low levels associated with miscarriage and implantation failure

✓ There is supporting data (RCT 2013)
✓ Careful patient selection and justification
✓ Transparent patient information
✓ Group-wide pooling of results and experiences
✓ Regular review of CARE data
✓ Continued awareness of the literature and communication with other users

Same approach for other media add-ons such as EmbryoGlue, AOA and Sper mobil. If we don’t replicate published improvements, we do not offer or promote.
Conclusions

- Decisions regarding treatment add-ons can be challenging for patients & clinics
- Robust data/RCTs not always available
- Patients often ask for them
- Transparent information is vital
- Clinics sharing experience and combining data can help build an evidence base to support decision making and progress.
Thank you for listening