

0090 Declining Semen Quality Among Singaporean Subfertile Men: A Retrospective Study

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Aims: i) To investigate the semen quality of a large cohort of subfertile men over a period of 15 years. ii) To evaluate whether age affects the semen quality.

Methodology: A retrospective study was conducted on 2469 couples who had consulted for subfertility investigation at Singapore General Hospital between year 2000-2001 and year 2015-2016. The male subjects had submitted their semen samples for seminal analysis to assess the semen parameters; inclusive of semen volume, progressive motility, viability, concentration, sperm morphology, total motile sperm count (TMSC) and normal motile sperm count (NMSC). The age and semen parameters were compared between year 2000-2001 and year 2015-2016 using Mann-Whitney U test. The relationships between the semen parameters and age were assessed using Spearman test.

Result: The age and semen parameters of subfertile men in year 2000-2001 were significantly different compared to year 2015-2016: age (30.0 vs 35.0 years), progressive motility (41% vs 40%), sperm concentration (42.2 vs 38.6 million/mL), morphology (3% vs 2%) and NMSC (0.50 vs 0.19 million), $P < 0.005$. Semen volume, progressive motility, viability, TMSC and NMSC were significantly and negatively correlated with age: -0.203, -0.173, -0.226, -0.151, -0.080, $P < 0.005$, respectively.

Conclusion: Our study shows that men who seek subfertility investigation in year 2015-2016 were older and the semen quality has declined as compared to 15 years ago. The decline in semen quality could be due to environmental, nutritional, lifestyle or socioeconomic factors. Semen parameters also showed a gradual decrease with increasing age of the men, which could affect their reproductive potential.