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Men's Health

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Case Study: Male Factor Infertility and the Role of ICSI

Patient Presentation:
A 31 year old woman and her 35 year old male partner presented after more than six months of trying to conceive without success.

The female partner was in good health, with a normal BMI, regular menstrual cycles and no significant medical history. Initial fertility investigations were unremarkable.

The male partner had obesity and a semen analysis demonstrated a significantly reduced sperm count. The couple were keen to conceive naturally and were advised on lifestyle modifications, including weight management strategies aimed at improving sperm health.

Investigation and Management:
Over the following six months, the male partner worked to improve his health through dietary changes and increased physical activity. Despite his efforts, he found it difficult to achieve significant weight loss and repeat semen analysis showed little improvement in sperm parameters.

By this stage, the couple had been trying to conceive for almost 12 months and were becoming increasingly concerned about the ongoing delay.

Following specialist fertility assessment, Intracytoplasmic Sperm Injection (ICSI) was recommended as the most appropriate treatment option to overcome the male factor infertility.

Outcome:
The couple proceeded with IVF treatment using ICSI, whereby a single sperm is injected directly into an egg to facilitate fertilisation.

Treatment was successful and resulted in an ongoing pregnancy.

Key Takeaways

- Male obesity can negatively impact sperm production and quality.
- Lifestyle modification remains an important first-line strategy but improvements in sperm parameters may take several months and are not always achieved.
- Early semen analysis can help identify male factor infertility and facilitate timely referral when appropriate.
- ICSI can be an effective treatment option when sperm count or quality significantly impacts fertilisation potential.

Male factors alone contribute to approximately 40% of infertility cases.

Early investigation and intervention can help couples access the most appropriate treatment pathway sooner.

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Approved by: Prof Tremellen

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Case Study: Looking Beyond Standard Semen Analysis to Sperm DNA Fragmentation

Patient Presentation:
A 28 year old woman and her 30 year old male partner presented after more than six months of trying to conceive. The female partner was healthy, had a normal BMI and no significant medical history.

The couple had experienced multiple early pregnancy losses despite achieving conception naturally.

A standard fertility work-up did not identify any significant abnormalities in the female partner. Routine semen analysis in the male partner demonstrated results within normal reference ranges.

Further discussion revealed that the male partner was a smoker and consumed alcohol in excess of recommended guidelines.

Investigation and Management:
Given the history of recurrent pregnancy loss and the presence of lifestyle risk factors, additional male fertility testing was undertaken, including assessment of sperm DNA fragmentation.

Results demonstrated elevated levels of sperm DNA damage, which may impair embryo development and increase the risk of miscarriage.

The male patient received information regarding modifiable lifestyle factors and committed to smoking cessation and significantly reducing alcohol consumption.

Three months later, repeat testing demonstrated a substantial improvement, with sperm DNA fragmentation returning to the normal range.

Outcome:
Following these lifestyle changes, the couple conceived again and achieved an ongoing pregnancy.

Key Takeaways

- Normal semen analysis results do not always exclude male fertility issues.
- Sperm DNA fragmentation may contribute to recurrent pregnancy loss and unexplained infertility.
- Smoking and excessive alcohol consumption are associated with increased sperm DNA damage.
- Lifestyle interventions can significantly improve sperm health and fertility outcomes.
- Male fertility assessment should be considered alongside female investigations when couples present with infertility or recurrent pregnancy loss.

For more information or to make a referral:

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