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THE IMPACT OF GOVERNMENT COVERAGE ON MALE FERTILITY PRESERVATION FOR ONCOLOGIC AND HORMONAL THERAPY INDICATION

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ABSTRACT

Introduction: In August 2010 the Quebec government initiated coverage for all aspects of fertility treatment including fertility preservation for medical reasons. The coverage for IVF was abolished in November 2015 however fertility preservation for oncologic reasons remains insured. For patients with cancer or other conditions requiring chemotherapy, preservation of their future fertility can be an important consideration. For many of those patients undergoing hormone therapy (HT) as part of gender reassignment, it can be equally important.

Methods: We analysed all cycles of semen preservation between August 2010 and December 2016 in the case of fertility preservation.

Results: The number of visits per year increased as the program became established: 37(2010), 80(2011), 64(2012), 103(2013), 134(2014), 92(2015), 158(2016). Oncology patients cryopreserved an average of 2.4 ejaculates (range 1-11) and HT patients 3.15 (range 1-7): this was statistically different (p=0.02). For concentration (51M/ml (range 0.1-536) vs. 23M/ml (range 1.7-99)) and motility (45% (range 1-93) vs. 42% (range 0-89)) there was no difference. For 26 oncology patients with an azoospermic sample, the majority (18) attempted at least one more ejaculate before giving up. In five of these patients they had a mixture of successful cryopreservation and azoospermic ejaculates.

Conclusion: The utilisation of fertility preservation programs requires a multidisciplinary approach including good public knowledge of their existence. Our data suggests that government insurance and the publicity associated with such a program helps to increase fertility preservation for medical indications. Both oncology patients and HT patients can benefit from the availability of such a program and should be encouraged to preserve as many ejaculates as the timing of their treatment permits even when one azoospermic sample is seen. The sperm concentration in HT patients tends towards being lower than the oncology patients: this may be explained by these patients having often started to take hormone therapy before coming for treatment whereas oncology patients usually cryopreserve prior to starting any treatment.

OBJECTIVE

The aim of the study was to analyse the impact on the use of fertility preservation of semen under a public coverage environment and the quality of the samples stored for future use.

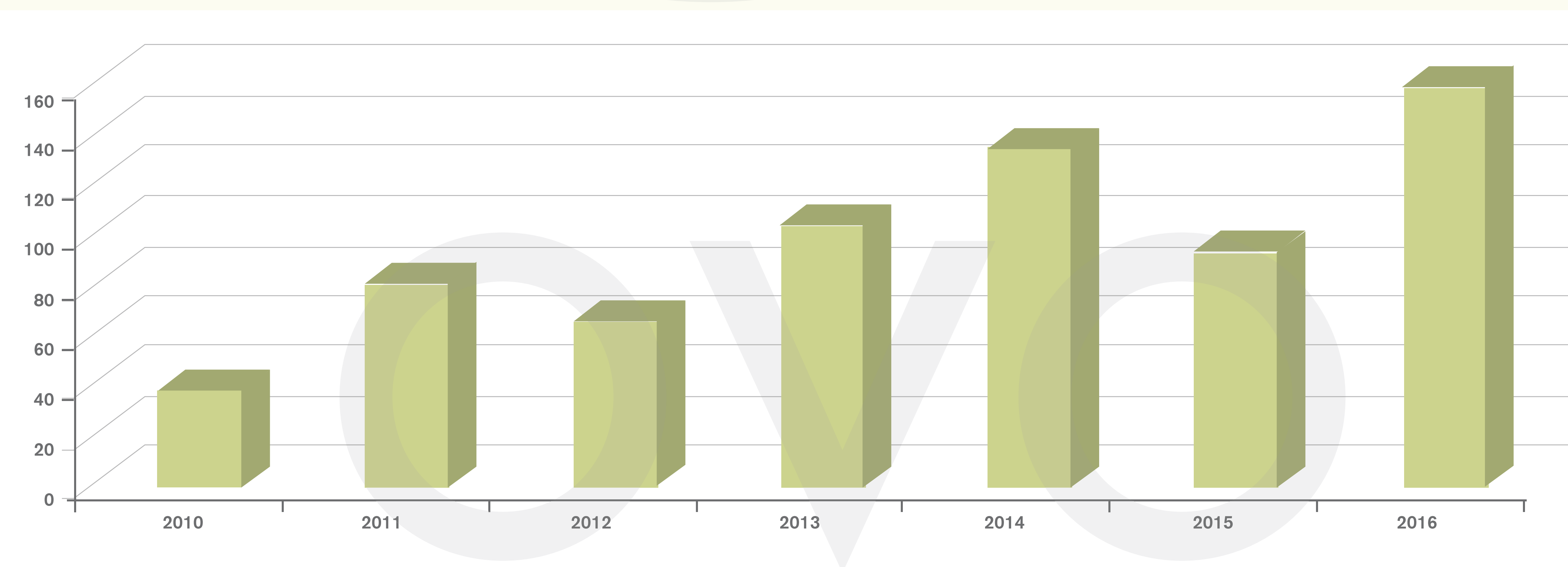
METHODS

All cycles of semen preservation prior to oncology treatment or hormone therapy between August 2010 when the government coverage of ART started and December 2016 were analyzed.

STATISTICS

Chi Square and T-test were used to assess significance in the analysis of the two groups. P< 0.5

RESULTS



| | Oncology | Hormone Therapy | |
|-----------------------|------------------|-----------------|--------|
| Number of ejaculates | 2.4 (1-11) | 3.15 (1-7) | p=0.02 |
| Average concentration | 51M/ml (0.1-536) | 23M/ml (1.7-99) | NS |
| Average motility | 45% (1-93) | 42% (0-89) | NS |

Twenty-six oncology patients produced an azoospermic sample, of these eighteen attempted further samples before stopping preservation. In five of the patients they produced a mixture of azoospermic and cryopreservation quality ejaculates.

CONCLUSION

Fertility preservation services are an important element in the management of both oncology and hormone therapy (HT) patients. As a result of the government coverage for these services we noted an increased uptake by patients. Clearly the fact that the patients no longer had to pay plays a pivotal role however the associated publicity surrounding ART techniques must also have been critical since the coverage for HT patients finished at the end of 2015 and we continue to see an increasing number of these patients. Oncology patients are still covered by Medicare despite the end of government coverage of ART in Quebec.

In most cases oncology patients have a limited window of opportunity to cryopreserve prior to starting treatment and this may explain why HT patients tend to cryopreserve more ejaculates. Furthermore based on our data the occurrence of an azoospermic sample should not dissuade the patient from attempting at least one more ejaculate in order to achieve cryopreservation.

Many of the HT patients are already in the process of their treatment and the use of hormones in these patients could explain the trend towards lower sperm concentrations in their ejaculates however the average concentration still falls within normal WHO parameters.

Further ongoing analysis of these cases will be required to assess the future use of the cryopreserved material. The risk of lost to follow up could be high in this group of patients. The long term storage of abandoned cryopreserved material is an ongoing and increasingly complex issue for ART clinics which will perhaps require collaboration with Health authorities to assist ART clinics in obtaining new contact information for patients.

