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Newsletter - FSP(I)

July 2021 (Volume 3)

A very good day to all of you reading this E-Newsletter. We welcome you to the 3rd edition of the FPSI eNewsletter.

In our last edition, we brought to you about fertility preservation for female patients with CAYA cancer. This time we are bringing to you:

- A synopsis of the 2nd article of a series of 3 published in the Lancet – "Fertility Preservation in Childhood, Adolescent, and Young Adult Cancer 2 (Renee L Mulder et al. Lancet Oncol 2021; 22: e57 – 67)".
- Excerpts from a review by Prof. Jacques Donnez which we think is very relevant in the current scenario.
- We also have one interview with Dr. Ethiraj Balaji Prasath – Embryologist, Thomson Fertility Centre, Singapore.
- We are ending this article with a tribute to Dr. Vishwanathan Shantha, Chairperson of Adyar Cancer Institute, Chennai.

FIRST ARTICLE

"FERTILITY PRESERVATION FOR MALE PATIENTS WITH CHILDHOOD, ADOLESCENT, AND YOUNG ADULT CANCER: RECOMMENDATIONS FROM THE PANCARELIFE CONSORTIUM AND THE INTERNATIONAL LATE EFFECTS OF CHILDHOOD CANCER GUIDELINE HARMONIZATION GROUP"

(Renee L Mulder et al. Lancet Oncol 2021; 22: e57 – 67).

This is a synopsis of the male patients with childhood, adolescent, and young adult cancer who are at an increased risk for fertility impairment when treatment adversely affects the function of reproductive organs. Patients and their families desire biological children but substantial variation in clinical practice guidelines reduce consistent and timely implementation of effective interventions for fertility preservation across institutions.

Introduction:

Advances in treatment for childhood, adolescent, and young adult (CAYA) cancer (ie, diagnosed aged ≤25 years) have produced 5-year survival rates that exceed 80% in Europe and in the USA.[1,2]. Male patients with CAYA cancer are at increased risk for hypogonadism and infertility if treatment includes gonadotoxic chemotherapy or radiotherapy to volumes exposing the testes or hypothalamic–pituitary axis, or if abdominal surgery has adversely affected the function of reproductive organs. [3-5]

Impaired spermatogenesis and secondary sequelae of androgen deficiency can result in infertility or reduced fertility.[6,7] Variations in clinical practice are barriers to the timely implementation of interventions that preserve fertility.

The EU-funded project, PanCareLIFE Consortium, in collaboration with the International Late Effects of Childhood Cancer Guideline Harmonization Group, reviewed the current literature and developed a clinical practice guideline for fertility preservation in male patients who are diagnosed with childhood, adolescent, and young adult cancer at age 25 years or younger, including guidance on risk assessment and available methods for fertility preservation.

To facilitate global consensus regarding this topic, a multidisciplinary group of international experts was organized to develop a transparent evidence-based Clinical Practice Guidelines (CPG) for fertility preservation in male patients with CAYA cancer. A multidisciplinary panel of 36 international specialists in paediatric oncology and haematology, radiation oncology, endocrinology (including paediatric endocrinology), reproductive medicine, gynaecology, psychology, epidemiology, and guideline methodology was convened.

The aim of this CPG was to help health-care providers to communicate the potential risks for hypogonadism (i.e, impaired spermatogenesis, testosterone deficiency, and central hypogonadism) and infertility and the options for fertility preservation to male patients who are diagnosed with childhood cancer tumour types aged 25 years or younger and to their parents, caregivers, or partners (hereafter referred to as families). The onset of puberty was defined as Tanner Stage II (corresponding with testicular volume of $\geq$4 cm^3)[8] We have included only the high and moderate quality evidence in the synposis.

Who should be informed about potential infertility risk?

The panel agreed that all patients with cancer and their families have the right to be informed about their potential risk for infertility, which can vary in magnitude on the basis of the specific treatment that is planned.

Who should be counselled about fertility preservation?

Regarding the risk for specific alkylating agents, the risk of impaired spermatogenesis increases with increasing doses of cyclophosphamide (high-quality evidence)[9,10,11] and with increasing doses of procarbazine and chlormethine (given as part of multi-agent treatment).

The evidence is scarce regarding a dose threshold for alkylating agents, with the most robust data reporting that azoospermia was unlikely after a cyclophosphamide-equivalent dose less than 4000 mg/m^2.[12] Patients who are treated with testicular radiotherapy or haematopoietic stem cell transplantation (HSCT), or both, are at increased risk of infertility. Patients who are treated with cisplatin or orchiectomy, and those treated with cranial radiotherapy are at risk for infertility.

Although with intra cranial radiotherapy gonadal function is not affected, spermatogenesis can be impaired by damage to the hypothalamic–pituitary axis. Although sperm production can be stimulated by use of hormonal therapy when paternity is desired, the panel agreed that these patients should be counselled about fertility preservation.

The panel concurred that if planned treatment did not include gonadotoxic modalities, patients with CAYA cancer and their families should be advised of the benefits and harms of fertility preservation within the context of their personal low risk of infertility and taking into account the risk of cancer recurrence or disease progression (i.e, absence of response to initial therapy) that might lead to a potential future need for gonadotoxic therapy.

What methods for reproductive preservation are appropriate to offer in counselling?

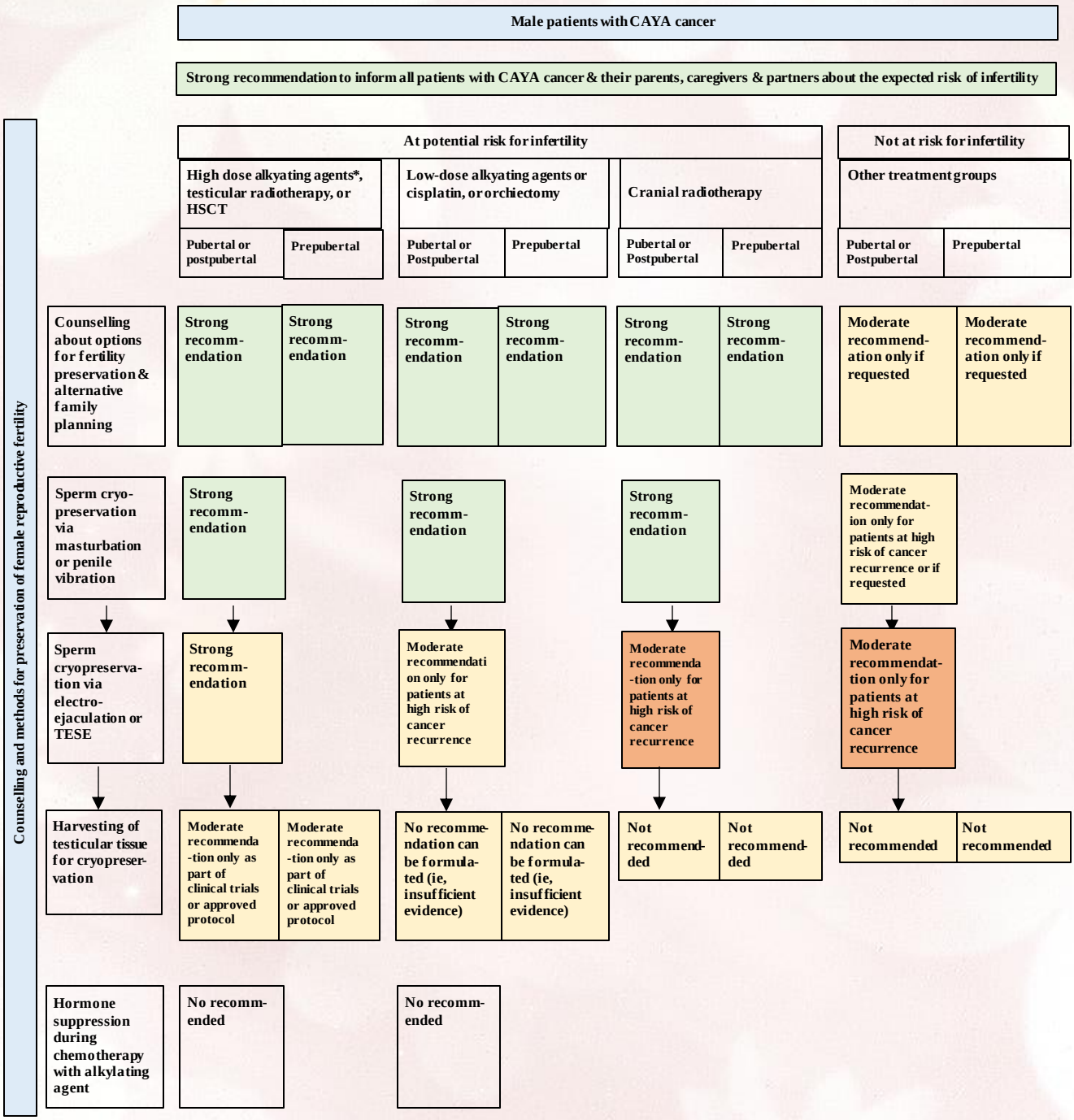
The panel strongly recommended offering sperm cryopreservation via masturbation or penile vibration to pubertal and post pubertal patients whose treatment will include high-dose alkylating agents or testicular radiotherapy.

When masturbation or penile vibration was not possible or successful, they strongly recommended offering sperm collection through electro ejaculation or testicular sperm extraction to pubertal or post pubertal patients.

Regarding the experimental technique of cryopreservation of testicular tissue from pre pubertal patients, the panel acknowledged that this procedure was invasive, that malignant cells could be reintroduced if testicular tissue was reimplanted and that no cryopreserved testicular tissue has ever been transplanted in patients with CAYA cancer before, and thus no human livebirths have occurred by use of this method.

However, they showed that it was the only method available for fertility preservation for prepubertal boys and in the absence of suitable alternatives for fertility preservation, the potential benefits for tissue collection and cryopreservation probably outweigh the potential harms. So, they moderately recommended this method for prepubertal patients who were at the highest risk of infertility and not for the low risk groups.

There was no evidence for the effectiveness of hormone suppression as a suitable method for fertility preservation.



Recommendations for preservation of reproductive fertility for male patients with CAYA cancer

*Colours represent the strength of recommendation for each method on the basis of the evidence (where green indicates strong recommendation, yellow indicates moderate recommendation, and red indicates that a method is not recommended), corresponding to colours used in previous International Late Effects of Childhood Cancer Guideline Harmonization Group publications. Arrows indicate the flow of treatment when methods are not successful or possible. For further details on recommendations see appendix pp 41–42. CAYA=childhood, adolescent, and young adult. HSCT=haematopoietic stem-cell transplantation TESE=testicular sperm extraction.. *Cyclophosphamide-equivalent dose ≥4000mg/m². †Cyclophosphamide-equivalent dose <4000 mg/m².*

References:

1. Gatta G, Botta L, Rossi S, et al. Childhood cancer survival in Europe 1999–2007: results of EUROCARE-5—a population-based study. *Lancet Oncol* 2014; **15:** 35–47.
2. Phillips SM, Padgett LS, Leisenring WM, et al. Survivors of childhood cancer in the United States: prevalence and burden of morbidity. *Cancer Epidemiol Biomarkers Prev* 2015; **24:** 653–63.
3. Green DM, Kawashima T, Stovall M, et al. Fertility of male survivors of childhood cancer: a report from the Childhood Cancer Survivor Study. J Clin Oncol 2010; 28: 332–39.
4. Romerius P, Ståhl O, Moëll C, et al. High risk of azoospermia in men treated for childhood cancer. Int J Androl 2011; 34: 69–76.
5. Skinner R, Mulder RL, Kremer LC, et al. Recommendations for gonadotoxicity surveillance in male childhood, adolescent, and young adult cancer survivors: a report from the International Late Effects of
6. Childhood Cancer Guideline Harmonization Group in collaboration with the PanCareSurFup Consortium. Lancet Oncol 2017; 18: e75–90.
7. O'Donnell L, Stanton P, de Kretser DM. Endocrinology of the male reproductive system and spermatogenesis. In: Feingold KR, Anawalt B, Boyce A, et al, eds. Endotext. South Dartmouth, MA: MDText.com, 2017.
8. Basaria S. Male hypogonadism. *Lancet* 2014; **383:** 1250–63.
9. Tanner JM. Growth at Adolescence, 2nd edn. Oxford: Blackwell Scientific Publications, 1962.
10. Skinner R, Mulder RL, Kremer LC, et al. Recommendations for gonadotoxicity surveillance in male childhood, adolescent, and young adult cancer survivors: a report from the International Late Effects of Childhood Cancer Guideline Harmonization Group in collaboration with the PanCareSurFup Consortium. *Lancet Oncol* 2017; **18:** e75–90.
11. Jahnukainen K, Heikkinen R, Henriksson M, Cooper TG, Puukko-Viertomies L-R, Mäkitie O. Semen quality and fertility in adult long-term survivors of childhood acute lymphoblastic leukemia. *Fertil Steril* 2011; **96:** 837–42.
12. Green DM, Zhu L, Wang M, et al. Effect of cranial irradiation on sperm concentration of adult survivors of childhood acute lymphoblastic leukemia: a report from the St. Jude Lifetime Cohort Study. *Hum Reprod* 2017; **32:** 1192–201.
13. Green DM, Liu W, Kutteh WH, et al. Cumulative alkylating agent exposure and semen parameters in adult survivors of childhood cancer: a report from the St Jude Lifetime Cohort Study. *Lancet Oncol* 2014; **15:** 1215–23.

ACKNOWLEDGEMENT

The first article is a compilation from "FERTILITY PRESERVATION FOR MALE PATIENTS WITH CHILDHOOD, ADOLESCENT, AND YOUNG ADULT CANCER: RECOMMENDATIONS FROM THE PANCARELIFE CONSORTIUM AND THE INTERNATIONAL LATE EFFECTS OF CHILDHOOD CANCER GUIDELINE HARMONIZATION GROUP". RENÉE L MULDER*, ANNA FONT-GONZALEZ*, DANIEL M GREEN, ERIK A H LOEFFEN, MELISSA M HUDSON, JACQUELINE LOONEN, RICHARD YU, JILL P GINSBERG, ROD T MITCHELL, JULIANNE BYRNE, RODERICK SKINNER, ANTOINETTE ANAZODO, LOUIS S CONSTINE, ANDRICA DE VRIES, KIRSI JAHNUKAINEN, ARMANDO LORENZO, ANDREAS MEISSNER, LEENA NAHATA, MARIJ DINKELMAN-SMIT, HERMAN TOURNAYE, RICCARDO HAUPT, MARRY M VAN DEN HEUVEL-EIBRINK, HANNEKE M VAN SANTEN, ANS M M VAN PELT, UTA DIRKSEN, JAAP DEN HARTOGH, ELINE VAN DULMEN-DEN BROEDER, W HAMISH WALLACE, JENNIFER LEVINE, WIM J E TISSING, LEONTIEN C M KREMER†, LISA B KENNEY†, MARIANNE D VAN DE WETERING†, on behalf of the PanCareLIFE Consortium, Lancet Oncol 2021; 22: e57 – 67.

SECOND ARTICLE

We are bringing to you a summary of an article written by Dr. Jacques Donnez in Fertile Steril May 2021 issue, addressing the very relevant question – "Fertility preservation in men and women: Where are we in 2021? Are we rising to the challenge?". He has reviewed 4 papers and I am sharing some of the excerpts of the same. You can read more about it @ https://www.fertstert.org/article/S0015-0282(21)00233-8/fulltext, published in May 2021 issue.

FERTILITY PRESERVATION IN MEN AND WOMEN: WHERE ARE WE IN 2021? ARE WE RISING TO THE CHALLENGE?

Here are some of the excerpts:

Oocyte cryopreservation after ovarian stimulation and ovarian tissue cryopreservation (OTC) are both methods endorsed by the American Society for Reproductive Medicine. In the first review, Cobo et al[1] reported data from one of the centres most experienced in the oocyte vitrification. They demonstrated that oocyte vitrification provides the highest yield not only for women with benign diseases or those seeking fertility preservation for personal reasons but also for cancer patients (i.e., of the start of treatment can be postponed).

Cobo et al stated that in the Instituto Valenciano de Infertilitad network, 2% of oocyte vitrifications are done for oncofertility, with a return rate of 7.2% in this group. Oocyte vitrification was also done quite commonly for patients who had endometriosis, as it is known that endometriosis per se or the surgery for endometriomas could lead to a decreased ovarian reserve.

The study pointed out some key conclusions regarding patient age at oocyte retrieval and the number of available oocytes and their effect on live birth rates. So, he established that in women who were less than 35 years of age, obtaining 10–15 oocytes led to reasonable success rates and cumulative live birth rates of 40%–70%, but they clearly stated that oocyte cryopreservation is by no means an insurance policy to secure future motherhood but only a means to increase their chances of having their own genetic child.

The second paper that was reviewed in this article was by Dolmans et al[2], which shed light on ovarian tissue transplantation. It was found that cancer was the most frequent indication for ovarian tissue cryopreservation (OTC) and ovarian tissue transplantation (OTT). Ovarian function recovery lasting several years was achieved in almost all transplanted women. The live birth rate was 30% among those conceiving naturally, and higher than that in transplanted women undergoing in vitro fertilization (IVF). So, they did say that women who underwent OTT should be considered as poor responders as they only produce smaller number of oocytes and with high numbers of empty follicles. The age at OTC was a determining factor as evidenced by the fact that women who gave birth in the IVF group were almost 5 years younger at the time of OTC than those who did not.

Another very important point that was established by the paper by Dolmans was that chemotherapy at the time of OTC did not impair the chances of success, and the data also showed that women undergoing or having completed several cycles of chemotherapy could still benefit from OTC. There were encouraging results in terms of live birth after OTT in this group.

The third paper that was reviewed by Prof. Donnez was a paper by Telfel & Andersen[3]. The authors proposed two procedures to restore fertility in women who may not be eligible for OTT. So, the first was, promoting growth of immature oocytes contained within stored tissue, and the second was, harvesting immature oocytes from small antral follicles released from ovarian tissue at the time of OTC, followed by in vitro maturation and IVF. These techniques are however still experimental.

The fourth paper reviewed was by Brannigan et al[4] which provided an overview of the field of male fertility preservation and also touched upon emerging stem cell technologies that might well transform the field of reproductive medicine in the future.

REFERENCES:

1. Cobo A, García-Velasco JA, Remohía J, Pellicer A. Oocyte vitrification for fertility preservation for both medical and nonmedical reasons. Fertil Steril 2021;115:1091–101.
2. Dolmans MM, von Wolff M, Poirot C, Diaz-Garcia C, Cacciottola L, Boissel N, et al. Transplantation of cryopreserved ovarian tissue in a series of 285 women: a review of 5 leading European centers. Fertil Steril 2021;115: 1102–15.
3. Telfer EE, Andersen CY. In vitro growth and maturation of primordial follicles and immature oocytes. Fertil Steril 2021;115:1116–25.
4. Brannigan RE, Fantus RJ, Halpern JA. Fertility preservation in men: a contemporary overview and a look toward emerging technologies. Fertil Steril 2021; 115:1126–39.

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The second article is a compilation from "FERTILITY PRESERVATION IN MEN ANDWOMEN: WHERE ARE WE IN 2021? AREWE RISING TO THE CHALLENGE? JACQUES DONNEZ, M.D., Ph.D. and MARIE-MADELEINE DOLMANS, M.D., Ph.D. Society for Research into Infertility; Gynecology Research Unit, Institut de Recherche Experimentale et Clinique, Universite Catholique de Louvain; and Department of Gynecology, Cliniques Universitaires Saint-Luc, Brussels, Belgium

For further reading one can download the various articles or can download the reviews by Prof. Jacques Donnez Fertility and Sterility® Vol. 115, No. 5, May 2021, 1089–90.

WEBINAR

HIGHLIGHTS OF FERTILITY PRESERVATION IN BREAST CANCER PATIENTS – WEBINAR THAT WAS HELD ON 1ST MAY 2021

BY DR. P.M.GOPINATH & TEAM

Breast Cancer is the most common cancer affecting women in the world and its incidence is increasing in India. About 14% of women with breast cancer are under the age of 40 years and are faced with fertility problems related to treatment of breast cancer.

The Fertility Preservation Society of India conducted a meeting on 1st May 2021 addressing all the key points related to the fertility and breast cancer.

Dr. Selvi Radhakrishna – Breast Surgeon, presented the data about breast cancer in young women from her practice and discussed challenges and outcomes of treatment.

Dr. Bawna Sirohi – medical oncologist from Apolla Proton Centre, addressed issues with systemic therapy for breast cancer and fertility preservation.

Dr. Subathra – Radiation Oncologist, from Apollo Cancer Institute, talked about recent advances in radiotherapy for breast cancer.

Following the talks there was a panel discussion with four real case scenarios. The optimal management of these clinical situations with timing and techniques of fertility preservation, the legal construct in our country related to fertility preservation, the impact on cancer treatment outcomes, quality of life was discussed by the panelists including the eminent Dr. Balaji Prasath.

The session was ably moderated by Dr. Gopinath – President of Fertility Preservation Society of India. There were clear takeaway points in preserving fertility in young women with breast cancer and this meeting was well attended by doctors and oncologists across the country.

The breast cancer synopsis can be downloaded by logging on to

https://www.omnicuris.com/academics/breast-cancer-in-young-women

INTERVIEW WITH

DR. ETHIRAJ BALAJI PRASATH – M.Sc, Ph.D

CHIEF EMRBYOLOGIST – THOMSON FERTILITY CERTRE, SINGAPORE

WAS PART OF THE TEAM WHO PRODUCED THE 1ST LIVE BIRTH IN THE WORLD FROM IVM OOCYTES TAKEN FROM CORTICAL OVARIAN TISSUE EX-VIVO IN 2012

1. What was your early life like?

My early life was in and around Chennai. I was born in Chennai. I had mu schooling in suburbs of Chennai, at Pattabiram. I studied in Panchayat school for my primary education and in Government High school for my secondary education. I moved for my Pre-University course (PUC) to Government Arts College, Cheyyar. I have developed interest in Biology because of my uncle's work as Livestock Inspector when I was 14 or 15 years old. I had seen him freezing bull semen with egg yolk for artificial insemination. I had observed live bull sperm under microscope in his work place. Also, a diagram of comparative account on embryology of different animals such as fish, frog, a reptile, bird and human I had seen in my cousin's biology book had kindled my interest in biology particularly towards reproduction. Like all Indian parents, my parents wanted me to study Medicine. So, I enrolled in biology group. I had my schooling in Tamil as medium of instruction. In PUC, the medium of instruction was English and I had my difficulties. I did well in Biology in University exams and obtained distinction. I did my Bachelors in Zoology in the same college and did my Masters in Special Zoology in the Department of Zoology of University of Madras. I took Invertebrate Reproduction for Masters thesis and Human Reproduction for my elective subject. This course prepares students for Research. I continued to do my PhD in the same filed under Prof T Subramoniam. My PhD thesis was on synthesis of yolk in Millipedes. Obtained my PhD in 1991.

2. Where did you train in embryology?

I had my training on Clinical Embryology as on-job-training (OJT) when I joined KKIVF Unit, KK Hospital in Singapore as Clinical Embryologist. I trained under Dianna Payne at University of Adelaide, Australia for ICSI, in 1995. I had an opportunity to observe her ICSI and I was on my own after returning to Singapore. I had been an observer at the Royal Masonic Hospital, London, UK for two weeks in 1996 and at Prof Yves Menezo's lab for Blastocyst culture in Lyon, France, in 2001. Most of my training comes from OJT at KKIVF

3. What drew you to Singapore?

I was doing research on reproductive and developmental Biology of invertebrates, particularly shrimps after my PhD with a fellowship from CSIR, India. My close friend Dr Subburaju who was in National University of Singapore (NUS) then informed me about a Research position in a project in the Department of Zoology, NUS. I applied for the same, as my field of research was relevant to the project, of which Prof Khoo Hong Woo, was the Principal Investigator, and I was chosen to work with him. That's when I moved to Singapore. My initial intention was to return to India in 1-2 years. My wife, Sumi, got admission in to a teaching course around this time. As she was bonded to Government of Singapore, I continued to stay in Singapore and got the miraculous opportunity of working as Clinical Embryologist at KKIVF, KK Hospital. My life took a big turn here and settled in Singapore with family.

4. How long have you been in the field of embryology and what attracted you about fertility preservation?

I had been working as Clinical Embryologist for past 27 years. Although I joined in 1994 with the designation of Scientific Officer, I became Chief Embryologist in 1999. I was looking after the IVF lab of KKIVF, the largest IVF Centre in Singapore in terms of workload, until end of October 2011. I moved to Thomson Fertility Centre in November 2011 and staying here to date. I started to work on Fertility Preservation in KKIVF. I was emotionally moved when patients seeking for hope to have children after their cancer treatment. We were getting a few queries on Fertility Preservation from Cancer patients, particularly parents of very young cancer patients (as young as 4 years old) before commencing their cancer treatment. So, we started Fertility Preservation at KKIVF. The emotion has become passion. KKIVF had converted FP in to a proper program by the time I left KKIVF.

5. Your achievement with immature oocytes in fertility preservation has been commendable. Can you tell us more about it?

Thank you. A 21-year-old female patient had borderline serous tumor on her right ovary and underwent fertility sparing right ovariectomy. Around 7 months after her post-surgery chemotherapy, the CA125 was rising. The left side ovary had a complex cyst suggestive of recurrent disease and she was referred to our Oncogynecologist. A salphingo ovariectomy was planned and patient discussed about FP at this time. The team of Oncogynecologist, myself and Dr. Loh, Head of KKIVF discussed and decided that patient cannot undergo stimulation due to the condition of the disease, or ovarian tissue cryopreservation as transplanting tissue may introduce disease again or collect immature oocytes *in vivo* as this may possibly infect and transmit disease in future.

Finally, we decided to harvest oocytes from surgically removed ovary, mature them *in vitro* and fertilize the mature oocytes by ICSI of her husband's sperm as she was legally married. Patient and her husband agreed. On the day of surgery, the ovary was sent to IVF lab in HPES buffered medium. The ovarian tissue was cut in to two parts and teased out. We found four immature oocytes and these were subjected to *in vitro* maturation for next 24 hours. On the next day, all 4 oocytes were mature we requested husband to produce semen sample. Isolated sperm were injected in to these 4 oocytes by ICSI. All four oocytes showed normal fertilization resulting in three usable embryos. The embryos were cryopreserved by slow freezing. Patient was disease free at 4 months after surgery and her CA125 normalized. Around 14 months' later patient came back for frozen embryo transfer (FET). Two of her embryos were thawed and transferred to her uterus after three cycles of combined oral pill treatment. This resulted in a healthy singleton live birth of a baby boy, weighed 2.58 Kg, 25th May 2012. We realized this was the first live birth in the world for such treatment and we published in Human Reproduction as a case report.

6. Since you are already working in a specialized field of embryology, has it had an impact on your routine embryology practice? Are there any lessons to be learnt?

Actually, the demand for FP is still not high to the extent of affecting my routine embryology practice. However, when there is case of FP with ovarian tissue cryopreservation and/or combined with in vitro maturation, it is very demanding on your time and energy.

Planning out properly with entire team of Onco surgeon, Fertility doctor and lab team is the most crucial part. It includes keeping all consumables ready for the procedure. Lab must be prepared to work long hours when such FP procedure is on. A written standard operating protocol is essential to execute the procedure in a professional way and to avoid confusion between and within teams

7. IVM has not caught up in a big way. In your opinion, what are the reasons?

Yes, true that IVM has not caught up in a big way. The success rates after IVM were reported to be much lower to start with although recent reports show improved outcomes. The levels of expertise and technical complications of oocyte collection both by Clinician and Embryologist, increased workload due to culture of immature oocytes and lower maturation rate make IVM less attractive to the IVF Centres. Also, lack of standardized protocol for IVM, varying outcomes among Centres are the other reasons for IVM not catching up.

8. What do you do in your spare time?

I maximize my spare time to be spent with my family. Watching movies, or playing games or assisting my wife in kitchen or trying new recipes or trying new restaurants are my favorite ways of spending spare time. I read research papers on and off to update myself with current trend in the field. In recent times, watching Netflix and Prime Video have dominated other interests.

9. Can you please tell us a little more about your family?

I have a beautiful family. My lovely wife, Sumi, is a house maker now. She taught Tamil in Secondary Schools in Singapore for 19 years and she quit her job to shower all her love on us. My son, Vishnu, is doing his Psychology for Bachelors degree, also trained in Carnatic music and is a popular singer in Vasantham, the Indian TV Channel of Singapore. My daughter, Sridevi, ventured in to diploma in culinary arts and works as Junior Chef with one of popular Indian Chefs in Singapore. My wife is my backbone. My family understands well of the demands of my job and supports me unconditionally.

10. You are a great inspiration for our young embryologists in India. Do you have any message for them?

I consider my job as my career and one must have passion to carry on as a Clinical Embryologist. I consider all embryologists to be lucky for they are chosen to work in this holy profession that helps desperate couples to achieve parenthood. I just want to say that don't ever give up, stay calm and don't panic. Please work as if you are the patient. Teamwork is the key to success and hence maintain a good team spirit with not only lab staff but also with entire team of IVF Centre. A clear and disciplined mind is absolutely necessary in this field.

A TRIBUTE

Last but not least, we would like to end with a tribute to Dr. Vishwanathan Shantha, who sadly passed away in January 2021. She was one of the doyens of cancer treatment in India and the chairperson of the Adyar Cancer Institute, Chennai.

Dr. Viswanathan Shanta was born on March 11, 1927, in Chennai (formerly Madras) to a distinguished family of academicians that included two Nobel Laureates, Sir C. V. Raman and S. Chandrasekhar.

She opted for a full-time career in medicine and graduated with her MBBS in 1949, DGO in 1952, and MD in Obstetrics and Gynecology in 1955 and chose the untrodden path which not many women in her era would have chosen. Dr. Shanta joined the fledgling Cancer Institute, established in 1954, by the Womens' Indian Association (WIA) Cancer Relief Fund under the leadership of the legendary social reformer Dr. Muthulakshmi Reddy. When she joined the Cancer Institute (WIA), the field of medical oncology was almost unheard of. Her mentor Dr. S Krishnamurthi who had formal training in general surgery and had a special interest in radiobiology and tumor pathology, encouraged Dr. Shanta. She, being a qualified gynecologist herself, received formal training in radiotherapy from the Princess Margaret Hospital in Canada in 1956–1957 and later studied bone marrow transplantation from the United Kingdom in 1968. Together the legendary duo conceptualized and practiced the important tenet of multidisciplinary management in various cancers ever since.

Over the years, Dr. Shanta was extremely concerned about the spiralling costs of cancer care and hence despite the several financial challenges that the Cancer Institute (WIA) faced, it remained true to its ethos of “Service To All” and the clinical services of WIA continued to remain free or subsidized to about 60% of its patients.

She worked tirelessly to raise donations from all quarters and also worked toward procuring government subsidies for the lifesaving, anticancer drugs.

It was under the leadership of Dr. Shantha that the Hospital-Based Cancer Registry and the population-based Madras Metropolitan Tumor Registry was established as a part of the National Cancer Registry Program of the Indian Council of Medical Research, and it is because of her efforts that we are now able to access the reliable data on cancer incidence and survival in the country.

Dr. Shanta's missionary contributions to cancer care won her several prestigious awards, including the Ramon Magsaysay Award for public service (2005), Padma Shri (1986), Padma Bhushan (2006), and Padma Vibhushan (2016), the second-highest civilian award given by the Government of India. However, Dr. Shanta, maintained that her greatest reward was to bring a smile on the face of suffering, cure patients with cancer wherever possible, and more importantly bring relief and comfort to them always.

I am sure the quote “Live your life in such a way that you will be remembered for your kindness, compassion, fairness, character, benevolence, and a force for good who had much respect for life, in general”, would completely summarize Dr. Shanta’s character, her deeds and her life.

Excerpts taken out from the obituary - Dr. V. Shanta: A cancer crusader with a mission of service above self, written by Dr. Arvind Krishnamurthy in the Indian Journal of Cancer Vol 58; 2: 2021. C

We do hope you have enjoyed reading this compilation and found it useful. We encourage all of you to become volunteers of FPSI as cancer is a now a household name and there are not many families who do not have or have heard of someone near or dear who have been afflicted with cancer. So we are going to be confronted with these problems increasingly and we being part of the society will help you to widen your knowledge horizon and also have a healthy discussion when in doubt as to the way forward in any solution…….. So do join us.

The membership form can be downloaded by clicking the following link.

Membership Form

We would also like to encourage you to talk about you experience dealing with cancer patients in the form of case reports, case series and review articles and submit them to TOGF on the below link.

https://www.tofjonline.org/

Leaving you with something to think about:

"Once you choose hope, anything is possible"

- Christopher Reeve

Best known for his role as Superman

So let us help the cancer survivors fulfil their dream of parenthood

- FPSI Team

The Onco Fertility Journal

Offical publication of the Fertility Preservation Society

Scope of the Journal

The Onco Fertility Journal covers technical and clinical studies related to health, ethical and social issues in the field of Fertility preservation, Protection for cancer patients, women with severe endometriosis, Haematological and Immunological Disease. Articles with clinical interest and implications will be given preference.

Indexing Information

The Journal is registered with the following abstracting partners: Baidu Scholar, CNKI (China National Knowledge Infrastructure), EBSCO Publishing's Electronic Databases, Ex Libris – Primo Central, Google Scholar, Hinari, Infotrieve, Netherlands ISSN center , ProQuest, TdNet, Wanfang Data

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