



ISOT Newsletter

ISOT Newsletter Aug-Sept - 2022

Vol 1. Issue No1

Dear ISOT Members,

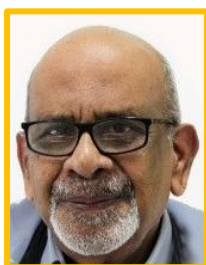
Greetings from ISOT executive committee members on our 75th anniversary of independence and happy teachers day. Our society currently has over 1500 members and is growing at a 7 to 10 per cent annual rate. This is obviously due to the growth of the deceased donation programme and an increase in the number of organ transplants. In addition, the society is evolving into an umbrella organisation for all other smaller societies, such as those representing liver, heart, and lungs, composite tissue, infectious disease, and transplant coordinators. Besides, our journal is now well-known in its field and will soon be added to pubmed.

For some time now, we have felt that we require a newsletter that will make for lighter reading and cover all the activities that cannot be covered in the journal. Dr. Narayan Prasad had previously published a similar newsletter. We hope to initially bring out the newsletter once every 2 months and then perhaps increase the frequency. We would like our members to add their stories, fascinating anecdotes, or images to make the reading more entertaining. Try to give the writer within you a chance.

The first issue includes a wide range of topics, and we are honoured to have Prof Chacko write the guest editorial. For the first time in TTS history, our Indian colleague Dr. Manikkam Suthanthiran has received the Medawar Prize for 2022, and this indeed is a great honor. We cover him as a legend in transplantation. Dr. Manisha Sahay covers women in transplantation. Plus, there are other featured items too. Please do send your feedback.

Thank You
Dr. Sunil Shroff
President – ISOT

Guest Editorial



Dr. Chakko Korula Jacob M.D, D.M, MNAMS (Neph)

Former Professor and Head Department of Nephrology,

Christian Medical College Vellore.

chakkokorulajacob@gmail.com

It is indeed a privilege to be asked to provide an editorial for the inaugural issue of the newsletter of ISOT.

I chose as my subject the unfortunate incident of the heads of Nephrology and Urology of the medical college, Thiruvananthapuram, being suspended on June 21st, 2022. This followed the death a few hours after surgery of a 62-year-old recipient of a deceased donor kidney graft. The reasons cited for suspension include a delay of 8 hours from retrieval to engraftment; the two concerned individuals were not present in the hospital during the preparation time; and some other factors.

It is pertinent to state that an 8-hour gap from retrieval to engraftment does not adversely affect the functioning of the graft. A well-preserved organ can be used many hours later. Personally, I have used a kidney 48 hours after retrieval with excellent graft function.

What appears to have been missed by "the powers that be" is that preparing a recipient takes several hours. This involves counselling, getting consent, physical examination, investigations including cross-matching for antibodies, arranging compatible blood for surgery and preoperative dialysis, if required. If the senior medical team were to remain in the hospital during this whole time, they would be fatigued by the time of the surgery, which is why procedures and protocols are in place.

Following the action by the government and media, I posted a WhatsApp message to a professional group as to how unfortunate and counterproductive the action taken was. This, somehow, got to some members of the media, and certain media houses had the courtesy, which is much appreciated, to contact office bearers and members of ISOT to get their version. This was duly publicized.

In future, it behoves "the powers that be" to get the opinion of experienced professionals in the field before stringent actions like suspension, which will remain as a permanent blot on the individual's records, are taken. Of particular interest in the Thiruvananthapuram episode is that the family of the deceased was in no way dissatisfied with the care provided.

Finally, "the powers that be" in this particular incident appear to have forgotten two basic principles. One is that a medical professional is taught from the very beginning to follow a fundamental principle, "Primum non nocere," translated to mean "First do no harm." The second is the 'Presumption of Innocence' until proved otherwise. This is the most basic requirement for a fair trial.

Making News

Pig-to-human xenotransplantation: A reality in the making?



Pig kidneys are often genetically modified prior to transplantation in to humans. Credit: Unsplash.

Currently, there is a significant gap between the supply and demand of organs for transplantation. Xenotransplantation serves to mitigate this problem by enabling an endless supply of organs that can save numerous lives. Although kidneys from genetically engineered pigs have been successfully transplanted into nonhuman primates, it is not clear if the same could be done with humans without getting rejected.¹ To better understand this, Montgomery RA et al. from the New York University Langone Transplant Institute recently transplanted kidneys from genetically modified pigs into two brain-dead human recipients maintained on circulatory and respiratory support.¹

Alpha-1,3-galactose, often referred to as "alpha-gal" in the pig kidney, is a major immunological hurdle that induces hyperacute rejection.² Therefore, to overcome this challenge, the researchers used alpha-1,3-galactosyltransferase-knockout pig kidneys, which were further implanted with the pig thymic autograft under the renal capsule (thymokidney) to minimise recipient immune activation and establish immune tolerance.³

Use of the genetically modified pig kidney caused no hyperacute rejection

Following reperfusion, they observed an instant diuresis, a steady decline in the serum creatinine level, and no evidence of catastrophic hyperacute or antibody-mediated rejection in serial biopsy samples or clinical instability. Although these results are encouraging, they also seem to increase scepticism. For instance, this study is limited by a short (54-hour) follow-up period, and the reason it was terminated so early has been attributed to practical difficulties. One would expect the pig kidney to work at least for 6 to 12 months, if not longer, but it is understandable that it is highly implausible to conduct such an experiment for prolonged periods in brain-dead individuals. Moreover, brain death itself leads to several biochemical changes leading to hemodynamic instability, and it is also not known if any hormonal therapy was used to overcome metabolic imbalance in the recipients that might have impacted immune responsiveness.

Despite the fact that this experiment has not significantly advanced our understanding of xenotransplantation or helped in obtaining regulatory approval for a clinical trial, it has been successful in showing that the genetically modified porcine thymokidney did not cause hyperacute rejection. Additionally, it has raised awareness of the potential of xenotransplantation in addressing the problem of the severe organ shortage for transplantation.⁵

References:

1. Montgomery RA, et al. *New England Journal of Medicine* 2022;**386**:1889-98
2. Butler JR, et al. *Transplant Immunology* 2016;**35**:47-51
3. Yamada K, Scalea J. *Xenotransplantation*: Springer, 2012. pp. 191-212
4. Griesemer A, et al. *Immunological Reviews* 2014;**258**:241-58
5. Cooper DK. *Xenotransplantation* 2021;**28**:e12718

Legends in transplantation



Dr. Manikkam (Suthan) Suthanthiran

Dr. Manikkam Suthanthiran has been awarded the Medawar Prize for 2022. He will accept the prize during the TTS 2022 President's Plenary on September 14, 2022, in Buenos Aires, Argentina. The Medawar Prize, named after TTS co-founder Sir Peter Medawar, is regarded as the most coveted prize in the world for achievements in the area of transplantation. The Medawar Prize honours eminent researchers whose efforts have had a significant impact on the area of organ transplantation.

Dr. Suthanthiran was born in the Indian city of Chennai. Following graduation from the University of Madras, he completed his Internal Medicine residency at Wayne State University in Detroit, Michigan, and his Nephrology Fellowship and Research Fellowship at Peter Bent Brigham Hospital and Harvard Medical School in Boston, Massachusetts. He is the Stanton Griffis Distinguished Professor of Medicine at Cornell University Medical College, as well as Professor of Biochemistry and Surgery. He is also the founding Chairman of the Department of Transplantation Medicine at The New York Presbyterian Hospital-Cornell, as well as the Chief of Nephrology and Hypertension. Dr. Suthanthiran is currently the Director of Cornell's Center for Islet Transplantation and the Co-Chair of the Executive Transplantation Council of the Multi-Organ Program of Columbia, Cornell, and New York-Presbyterian Hospital.

Dr. Suthanthiran's research focuses on transplant immunology. His group investigates T-cell signalling, the mechanism of action of immunosuppressive agents, and the immunology and molecular biology of allograft rejection. His laboratory's original discoveries include the revelation that the CD2 antigen is a receptor for antigen-presenting cells and that T cell/APC interaction generates the required T-cell co-stimulatory signal. The researchers also discovered that signalling through the T-cell CD3 protein induces antigen-specific cytotoxic action, and they revealed a T-cell surface version of TNF-alpha. Furthermore, their research demonstrated that cyclosporine and tacrolimus induced TGF-1 hyperexpression and highlighted the significance of advanced TGF-1 overexpression as a mechanism for CNI toxicity and cancer development in organ transplant patients. They also created a competitive quantitative polymerase chain reaction test and used it to characterise acute and chronic rejection. Last but not least, they have developed urine cell mRNA profiling for the non-invasive diagnosis and prognosis of acute rejection of renal allografts.

Resident's Corner

Renal Transplantation – My Perspective

"I am an MCh resident in my first year at the Department of Urology at AIIMS Jodhpur. Having participated in five transplant cases to date, albeit a small number, has altered my outlook on renal transplant operations.

We have bi-monthly inter-disciplinary transplant meetings at AIIMS Jodhpur to discuss prospective candidates, assign tasks, and troubleshoot anticipated problems. As first-year residents, our primary responsibility is to prepare renal transplant patients for surgery. Getting a transplant patient ready for OT is a lengthy and daunting task with an exhaustive checklist. We must ensure the completion of numerous investigations and medical

references. We must also facilitate significant ground-level interactions among various departments and teams. When done right, our planning makes sure that everyone is on the same page and that the surgery goes smoothly.

In each of the five cases in which I have been involved, the donor has been the mother. Despite their sacrifice, the greatest joy for them is to see their child have a second chance at life; to experience rebirth and to have hope for the future. "

Dr. Jeena Kudunthail Raju

MCh resident (1st year), Department of Urology, AIIMS Jodhpur.

Women in Transplantation



Dr Manisha Sahay

Editor-in-chief, Indian Journal of Transplantation,

Professor and Head, Osmania Medical college, Hyderabad,

Vice- President, WIN India.

"Men Are From Mars, Women Are From Venus" Gender Disparity in Transplantation

End-stage organ dysfunction is best treated through organ transplantation. India has seen a dramatic rise in the number of transplants over the last decade, including both live and deceased donor transplants, ABO-incompatible transplants, paired kidney transplants, and other forms of transplants. Donations are also made in the event of circulatory death. One thing that has not altered throughout the years, though, is the sex and gender disparity.

Sex refers to "the biological and physiological differences between men and females, such as reproductive organs, chromosomes, hormones, and so on." Gender is defined as "the socially constructed characteristics of men and women, such as norms, roles, and relationships within and between groups of men and women." Despite the fact that both terms are used interchangeably, there is a significant distinction between the two. Sex is determined by biology, but gender is created by humans.

Most live donors are women, but the majority of recipients are men. When it comes to female donors, husbands or moms are the most common. There are several probable explanations for this discrepancy.

Could there be a medical explanation for the discrepancy? -Effect of Sex

In reality, the female kidney is smaller and lighter than the male kidney, so transplanting a female kidney into a male recipient leads to a lower nephron dosage and inferior outcomes. Additionally, the female kidney is more sensitive to nephrotoxic insults. Therefore, male-to-female transplants may be superior.

Immunologically, female-to-male transplants are more successful. During pregnancy, women become sensitive to their spouse's antigens. Therefore, if a woman gets a kidney from her husband, there is an increased chance of antibody-mediated rejection. Even in transplants from men to women (other than husband-to-wife transplants), women are immunologically at a disadvantage due to the absence of the Y-Y antigen in females, which leads to the production of antibodies to the Y antigen that may ultimately induce rejection.

Thus, male-to-female and female-to-male transplants have both risks and benefits. Consequently, medical factors alone cannot account for the gender discrepancy in transplantation.

Are social factors the fundamental basis of this disparity? -Effect of Gender

By default, wives are the donors. Men are often the primary breadwinners, while women rely on their husbands for financial support. Also, while males are often the heads of households, families may not want them to give. It is acceptable for spouses and mothers to donate on their own in the vast majority of cases. In some instances, though, women are forced to donate their kidneys. They have no choice and no voice.

Similarly, fewer women are among the recipients. Even children are subject to discrimination.

A step forward in the future

This mindset must change. The choice to donate should be made voluntarily, not under duress. Gender inequality causes enormous harm to population health across the world, which warrants comprehensive initiatives to improve gender equity in health at all levels.

Neither man nor woman is superior to the other. This mentality shift is possible via collaborative efforts amongst cultures. The Indian Society of Organ Transplantation (ISOT) has always given men and women equal chances and firmly promotes gender equality. ISOT has developed a "Women in Transplantation" (WIT) wing with the goal of focusing on women's concerns in transplantation and changing public attitudes. This wing will be the

voice of women in India and will work to change the gender inequality in transplantation in India.

"His-story is history. It is time for Her story.

It is not a woman's fight; it is a human right"

Gender equality involves the participation of men and women, boys and girls, the public, and society. It is the obligation of everyone. Gender equality is not a women's issue, it is a people issue. It has an impact on everyone.

The Indian Society of Organ Transplantation acknowledges this and vows to strive toward gender equality. The establishment of the WIT wing is the first step in achieving this goal.

Patient advocacy

Dilip Dada Deshmukh - Man behind "Civil Hospital Ahmedabad model"

Dilip Dada Deshmukh, a social worker and the founder of the "Angdan" charity organisation and a liver transplant recipient himself, has committed the second inning of his life to raising awareness about organ donation. In 2018, he was diagnosed with hepatic cirrhosis and had liver transplantation in July 2020. While at the hospital for a transplant work-up, he met patients who had been waiting for years for a kidney or liver transplant owing to a lack of donors. He resolved to raise public awareness about organ donation in order to enhance the pool of deceased organ donors, ensuring that every patient in need receives a donor as soon as possible. His awareness campaign was so successful that even during the COVID epidemic, his team was able to enable 220 organ donations after educating ICU physicians and non-governmental organisations. His awareness strategy has been adopted in other Gujarat districts with positive outcomes. To successfully expand the donor pool, his framework stresses the need to proactively engage social workers in organ donation programmes throughout the country.





Make your diagnosis

A 12-year-old deceased-donor kidney transplant recipient visits your OPD with complaints of abdominal pain. On examination, you document graft tenderness and advise urine analysis, kidney function tests, complete blood count, and ultrasonography of the transplant kidney. What do you notice in this ultrasound image?



Find the answer in the upcoming newsletter.

Conference update - ISOT Mid-term (Hybrid) Conference, Patna

The ISOT mid-term (hybrid) conference was conducted at the Hotel Panache in Patna between March 26 and 27, 2022. The scientific programme comprised an intensive care unit and a coordinator's workshop on brain death and organ donation, pre-transplant fundamentals, donor pool expansion, post-transplant infections, panel discussions, and a brief session on multi-organ retrieval and bench dissection.

Dr. Sunil Shroff, the national president of ISOT, advised the state government to organise a task group with state health officials as its convenor and to encourage the private sector by completely funding transplants if government facilities where organs are retrieved lack the means to do so.

Dr. Vivek Kute, secretary of ISOT, lamented that numerous health care facilities in Bihar lacked a brain-dead committee. The organising secretary of the conference, Dr. Harsh Vardhan, urged the government to be more proactive in granting funding for transplantation and to adopt a mission mode in order to boost living and deceased organ transplantation in the state. He also proposed adopting the "opt-out model" practised in Spain and the Indian state of Kerala. According to this concept, organs of brain-dead patients can be harvested for donation unless the family objects.







You are cordially invited for

TAC SUMMIT
2022



Share and present your research on use of Tacrolimus in Organ Transplantation

Dear Colleagues,

We Transplant Physicians always endeavour to learn and inculcate the learnings in order to deliver what is best for Transplant patients. This is happening with each of us through clinical discussion, conferences, clinical research and using advanced technology, to provide the best healthcare to our patients.

The "TAC SUMMIT 2022" on Organ Transplant Research Presentation is an academic - clinical and competitive novel research presentation amongst Organ Transplantation Fellows doing DM/ DNB/ Fellowship in Transplant. Each one of you is getting opportunity to project and sharpen your ability by presenting research on "Use of Tacrolimus in Organ Transplantation".

Your research should be unique, paving the way for novel treatment guideline and provide education involving challenging clinical research on Transplantation.

We will review all submitted presentations in step manner following the presentation for final selection and presentation at ISOT 2022. The zonal coordinator will do in-depth review of each presentation and amongst them, the best cases from each zone will be selected for the Preliminary round. After this round, the Top 4 research papers will get an opportunity for Grand Round presentation in ISOT 2022 at Nagpur.

Your immense efforts will be valued by us. The winner will receive an award in form of "Academic Short Course" at one of the Best Transplant Unit in USA or Europe. All the Runner up Finalists including participants will be rewarded as per decision of the Jury.

**WE ARE LOOKING FOR YOUR PARTICIPATION
AS PER THE FOLLOWING SCHEDULE:**

Enrolment and submission of paper (abstracts)	by 16 JUL 2022
Zonal Case presentations	on 16 AUG 2022
Preliminary Round	on 16 SEPT 2022
Final Grand Round in ISOT	on 16 OCT 2022

Please mail your
Paper/Abstract at
tacsummit2022@gmail.com

With Kind Regards,


Dr. Sunil Shroff
President
ISOT


Dr Vivek Kute
Honorary Secretary
ISOT

An Academic Initiative by Mankind Pharma Limited.

Upcoming Conferences

50th British Transplantation Society

September 5-8, 2022

Belfast, UK.

29th International Congress of the Transplantation Society (TTS 2022)

September 10-14, 2022

Buenos Aires, Argentina.

Banff-CST Joint Meeting

September 19-23, 2022

Alberta, Canada.

32nd Annual Conference of The Indian Society of Organ Transplantation

October 12-16, 2022

Nagpur, India.

Asian Transplantation Week 2022

November 17-19, 2022

Seoul, South Korea.

ISOT Newsletter – Editorial Board

Editor-in-Chief

Dr. Sunil Shroff

Editors

Dr. Manisha Sahay

Dr. Vivek Kute

Associate Editors

Dr. Sanjay Kolte

Dr. Narayan Prasad

Assistant Editors

Dr. Chandra Shekar Annamalai

Dr. Sourabh Sharma

Social Media Editors

Dr. Divya Bajpayee

Dr. Sanjeev Nair

ISOT Council Members

President

Dr. Sunil Shroff

Past President

Dr. Jai Prakash

President-Elect (Physician)

Dr Georgi Abraham

Vice President (Surgery)

Dr Sanjay Kolte

Vice President (Physician)

Dr Deepak S Ray

Vice-President (Basic Science)

Dr Pallav Gupta

Honorary Secretary

Dr. Vivek Kute

Joint Secretary

Dr Manish Balwani

Treasurer

Dr Pankaj Shah

Council

Dr. Sanjay K Agarwal
Dr Sanjeev Gulati
Dr Subho Banerjee
Dr Shyam Bihari Bansal
Dr Arpita Ray Chaudhury
Dr Divya Bajpai
Dr Jigar Shrimali
Dr Gireesh MS

Editor, Indian Journal of Transplantation

Dr Manisha Sahay

Submission Guidelines

Members of ISOT are invited to submit articles, personal perspectives, and stories related to the field, which may include intriguing cases, appealing images, jokes, and cartoons, as well as news regarding regional and state meetings. The maximum length for submissions should be between 800 and 1,000 words. Please include a statement stating that your entry does not violate any copyrights. Kindly submit to isotnewsletter@gmail.com

All newsletters will be made available on ISOT website (<https://isot.co.in/>)

© All Rights Reserved 2022 Please seek permission before re-publishing.
