



Sri Ramakrishna
Hospital (MultiSpeciality)

pulse

Happenings at Sri Ramakrishna...



7TH APRIL
WORLD
HEALTH DAY



Shri.D.Lakshminarayanawamy
Managing Trustee

It gives me immense happiness to be a part of this organization and privilege to be the part of the team that constantly strives to provide the best possible. We work with a vision to make world-class healthcare affordable. We believe constant change is important to bring the best out of anything. Similarly technology is the foundation of state-of-the-art medical services.

From organizing vaccination drives to children, raising awareness among students and the public on health, organizing blood donation camps, signing up campaigns for organ donation and contributing to the community through the online conversation using social media, Sri Ramakrishna Hospital takes efforts to create a healthier world. Let us unite to create a fairer and healthier world for all.

Together, we can make a difference by adhering to good and healthy lifestyle and living habits.



Dr. S. Rajagopal
Medical Director

Sri Ramakrishna Hospital has always been a forerunner in conducting diverse academic programs alongside its clinical achievements. The emphasis on clinical club meetings, where discussing interesting cases adds an enriching dimension to the professional development of the team.

The specific focus on General Medicine, General Surgery and Vascular Surgery this month demonstrates a commitment to staying updated with medical advancements and addressing a broad spectrum of healthcare needs. This proactive approach not only benefits the medical professionals involved but also enhances the overall quality of patient care.

World Health Day, a global health awareness day is celebrated every year on April 7th. The theme for World Health Day 2024 is "Our planet, our health: Unite for a fairer, healthier world". It is celebrated to create awareness of the importance of health. Human health is being adversely affected due to a hectic lifestyle, work and stress. We believe being physically, mentally and socially healthy is the definition of human health. We all should ensure the adoption of best healthy habits for ourselves and our near and dear ones.

Editorial Team

Dr.N.Loganathan
Pulmonologist

Dr.S.Prahadeeshwaran
Head - Public Relations

Mr.Murali Kaliappan
Head - Marketing

Sri Ramakrishna Hospital SUSTAINABLE & RESPONSIBLE HEALTHCARE LAB AWARD

Water and energy conservation are essential for a sustainable future. Individuals and businesses can play a significant role in shaping a sustainable future by focusing on energy and water conservation.

Being socially responsible leader, Sri Ramakrishna Hospital pioneered in Coimbatore and installed Innovative Dry Chemistry Laboratory technology in the year 2013. This initiative has contributed in saving 1 crore liters of water in the last 10 years. By adapting sustainable water saving Lab technology, Sri Ramakrishna Hospital also helped reducing Greenhouse Gas emissions and global warming.



Being socially responsible, Sri Ramakrishna Hospital was awarded with "Sustainable & Responsible Healthcare Lab Award" by Mr. Krishnamurthy, General Manager, QuidelOrtho India on the occasion of 40th Founder's Day celebrations.

Sri Ramakrishna Hospital - WORLD KIDNEY DAY - 14.03.2024

"World Kidney Day, 2024" was celebrated on 14 March 2024, to spread awareness regarding the significance of kidney health and the risks linked to chronic kidney disease. The theme for World Kidney Day, 2024 is "Kidney Health for All - Advancing Equitable access to care and optimal medication practice." Timely detection is crucial to preventing the further growth of kidney diseases along with the optimal use of antibiotics, as unprescribed and over dosage of antibiotics are always a threat to the health of kidneys.



This event was graced by Dr.S.Rajagopal, Medical Director, Dr.S.Alagappan, Medical Superintendent, Sri Ramakrishna Hospital. Dr.N.Chezhiyan, Consultant Nephrologist & HOD and Dr. P.Kathamuthu, Consultant Urologist & Andrologist, Sri Ramakrishna Hospital were the speakers of the "World Kidney Day-2024". This awareness event was attended by Dr.G.Madhu Shankar, Consultant Nephrologist, Dr.Ganesh Prasad, Consultant Urologist & Andrologist, Dr.Karpagavalli, Junior Consultant, DNOs, Nursing staffs and over 200 students.

A Poster Designing competition was conducted to the Nursing Staff. A total of 9 teams from various departments participated and the top three winners were awarded.



Pregnancy in Pre-existing Renal Disease

Mrs. D, at her 17 years of age (in 2011) developed orthopnea, facial edema, rash in bilateral ankle region, low grade fever and easy fatigability. She was evaluated at outside hospital and found to have SLE (ANA+, dsDNA+) and also had active urinary sediments (2+Blood, 2+Albumin).

She underwent renal biopsy- Lupus nephritis class IV. In the same admission, developed an episode of hemoptysis. Induction treatment with pulse steroids and cyclophosphamide injection (6 doses) and maintenance treatment with ACE inhibitor, Azathioprine and prednisolone. She was on follow up with us since 2014.

She got married in February 2019 and followed up in Bangalore. She conceived in December 2019, without proper evaluation she had spontaneous abortion due to congenital heart block. APLA panel work up was negative. She lost follow up for 1 year and presented to us with complaints of facial puffiness, leg swelling, joint pain and tiredness. Repeat renal biopsy was done on July 2021. It revealed lupus nephritis class IV(2/9 cellular crescent), activity index 10/21.

Steroid dose was increased and switched to mycophenolic acid instead of Azathioprine and also started on Ramipril. Patient had remission of proteinuria to 1.9g by October 2021. Dose of steroids and mycophenotic acid was gradually tapered. In May -2022 she conceived while she was on high dose of ACE inhibitor, hence suggested termination of pregnancy and she underwent MTP. She was anxious to conceive hence mycophenolic acid was switched to Azathioprine and was gradually ACE inhibitors tapered. She was on maintenance treatment with azathioprine and prednisolone.

She conceived in May 2023 when she had a proteinuria of 1 gm/day. She wanted to continue her pregnancy. During the antenatal period proteinuria increased to 2.6 grams in July 2023 and remained almost the same. Her serum albumin was 3.4 gram. In the 3rd trimester her proteinuria increased to 3.1 gram, managed conservatively. At 37 weeks, she was admitted with oligohydramnios and induction done.

She delivered healthy baby on 13.02.2024 by Vacuum assisted vaginal delivery. The baby had no congenital anomalies and weighed 2.4kg at birth. She had normal BP and normal renal function throughout pregnancy.

Discussion

Patient with LN are at increased risk of gestational hypertension, preeclampsia, flare of SLE and LN and also worsening of proteinuria. With regards to fetal outcome there is increased incident of preterm birth and IUGR. In spite of complications, generally the patients are very keen to conceive, due to social reasons.

For safe outcome of mother and fetus shared decision making with patient and risk stratification process followed by regular maternal and fetal surveillance helps. Immunosuppression should be continued throughout pregnancy. HCQS can be added. ACEI/ ARB and mycophenolate should be discontinued before pregnancy.

MATERNAL RENAL OUTCOMES ACCORDING TO PRE PREGNANCY SERUM CREATININE

Creatinine < 1.5 mg/dl

Permanent loss of GFR in < 10 % of women
Greatest risk if GFR < 40ml of ml / min and proteinuria > 1gm / day
Major determinant of ESRD progression is hypertension
40% risk of preeclampsia if baseline proteinuria >500 mg/day

Creatinine 1.5-2.5 mg/dl

Decline or permanent loss of GFR in 30% of women
Increased to 50% if uncontrolled hypertension
10% ESRD soon after pregnancy

Creatinine >2.5 mg/dl

Progression to ESRD highly likely during or soon after pregnancy

FETAL OUTCOMES ACCORDING TO MATERNAL PRE-PREGNANCY SERUM CREATININE

Outcomes after accounting for first-trimester miscarriage:

Creatinine<1.5 mg/dl

Live births in >90% of women
Up to 50% preterm delivery, 60% small for gestational age if Baseline proteinuria > 500 mg/day

Creatinine 1.5-2.5 mg/dl

Live births in about 85% of women unless uncontrolled Hypertension (MAP>105) at conception
60% prematurity (preeclampsia/fetal growth restriction)

Creatinine >2.5 mg/dl

Fetal loss high; estimates uncertain

The patient was managed by Dr.N.Chezhiyan, MD, DM(Nephrologist and HOD) and his team Dr.S.Karppagavalli DNB, DrNB (Asst. Nephrologist) and Dr.S.J.Premika MBBS (JMO)

Dr.N.CHEZHIYAN

MBBS., MD., DM (Nephrology)

Consultant Nephrologist & HOD





Diet in Chronic Kidney Disease: Is all the starving really worth it?

Nutrition is about eating healthy & balanced diet which helps the body to function & grow. Making healthy food choices is the key to better physical & mental health. Eating nutritious diet is important to provide energy, to build muscle, to fight against infection & be active. A healthy & appropriate diet becomes all the more important in those with Chronic kidney disease (CKD) where malnutrition & myths about nutrition co-exist to make already marginal condition even worse. In an era where information is freely available across the internet, where the authenticity is debatable, are all the traditionally advocated dietary restrictions really worth it? Do they really help in delaying the progression of CKD? Let's try & decode the myths & realities associated with diet & CKD? A healthy diet comprises of carbohydrates, protein, fats, vitamins & minerals. Each component is important to have a whole some meal to fuel the mind & the body. Carbohydrates provide the body with the energy needed to function, to maintain a stable body weight & also to utilize the protein in diet. Protein is important to help build muscle, repair tissues & fight infection. Vitamins & minerals are necessary for cell function, repair & immunity. Excess protein intake leads to increase in intake of phosphate, potassium, sulfate along with sodium & also to accumulation of nitrogenous waste products. This can lead to an acidotic milieu, leading to bone erosion, fatigue & other bone mineral abnormalities associated with CKD. A high protein diet in a select cases has also shown to cause progression of kidney disease. Protein restriction hence, is the cornerstone in CKD diet. Although this step has some metabolic benefits, the role in delaying the progression of CKD is controversial & much debated. A new study also shows that intake of very low quantity of protein, particularly after dialysis initiation has resulted in more deaths.

How much protein should I take if I have kidney disease? Your intake will depend on the stage of renal function. It will be decided by your Nephrologist & your dietician will help you eat healthy. Normal requirement of protein is 1.0 g/kg/day. In broader terms, you must take 1.0 g/kg/day in the initial stages of CKD & as CKD progresses to advanced stage 5, you should restrict to 0.8 g/kg/day. Restricting protein beyond this level has shown to have more adverse effects like muscle loss, fatigue, poor quality of life & more deaths.

What foods are rich in protein? Protein comes from lentils, unsalted nuts, grams, egg, fish, poultry & meat.

Which protein is better? Plant based or animal based? Although absorption & availability are better with animal protein, plant based protein has benefits of lowering the acidic milieu & helping favourable metabolic profile. Plant based protein diet also helps in renal stone diseases.

Will my proteinuria reduce if I reduce protein intake? No. in protein losing states, one must consume 1.0 g/kg/day with the grams of protein lost in urine every day. Reduction in protein intake can have many negative metabolic effects.

I am on dialysis. How much protein should I take every day? Dialysis can lead to loss of protein & iron. If you are on dialysis, you must consume 1.0 – 1.2 g/kg/day protein along with adequate calories, vitamins & minerals.

How much salt can I take in a day? Its advisable to reduce salt intake to 4 g/day NaCl or 2 g/day of sodium. Restricted salt intake can help reduce BP & volume status.

Can I substitute rock salt with table salt for health benefits? No. Rock salt has 90-98% NaCl. Its no different from table salt. On the other hand, be cautious in substituting Potassium supplements as it can be harmful for your heart.

What foods should I avoid to reduce salt intake? Salted snacks, pickles, canned foods, seasoning sauce, frozen foods, takeout foods are rich in sodium.

Can I consume fruits & vegetables? Yes, unless your doctor or dietician instructs you do so. Consume low potassium fruits & vegetables like grapes, apples, papaya, berries, lettuce, cucumber, cabbage, corn, peas & cauliflower. Reduce potassium rich foods like bananas, citrus fruits like oranges, lemons, tomatoes, dark & green leafy vegetables.

Should I boil & strain my vegetables before consumption? The idea of leaching vegetables has been prescribed only in very select cases. Its not routinely practiced.

In short, strict dietary restriction in those with CKD is not the norm any more. Very low protein diet has no benefit in delaying the progression of CKD, but can be harmful in few subjects.

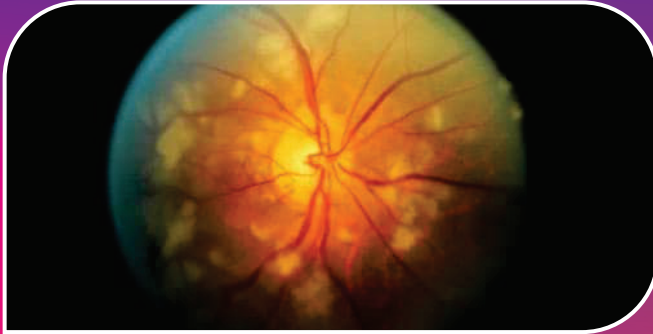
Always consult your Nephrologists & Dietician for diet plan based on stage & nature of kidney disease.

Dr.G.MADHU SHANKAR

MD, DM(Nephro) (AIIMS), SCH(ASH),
Clinical Fellowship (Toronto)

Consultant Nephrologist





Case Report – Purtscher's Retinopathy After Childbirth

A 23 year old postnatal female patient was referred from the neuro ward with a history of decreased vision in both eyes for 1 week duration. Patient had delivered a baby through LSCS in an outside hospital 1 week back following which she had noticed decreased vision in both eyes. There was no history of any systemic illness and her pregnancy was uneventful. On examination, her visual acuity was 6/60 in both eyes which was not improving with glasses. IOP was normal in both eyes.

Anterior segment examination was unremarkable and pupils were equal and sluggishly reacting to light. Dilated fundus examination showed polygonal areas of retinal whitening (infarcts) between arterioles and venules in the posterior pole without any



hemorrhages. Retinal vessels were normal and no hypertensive changes were detected. Her systemic examination was unremarkable and blood pressure was normal and CBC, ESR, RBS and other blood investigations were within normal limits. Hence, the patient was diagnosed with Purtscher's retinopathy and started on high dose IV Methylprednisolone in consultation with the neurologist. After 3 doses, there was slight improvement in visual acuity and patient was discharged with regular follow-up advice.

Purtscher's retinopathy is an uncommon disorder originally described in patients with severe head trauma, but also seen following compressive chest injuries and in non-traumatic cases. Non-traumatic etiologies include acute pancreatitis, fat embolism syndrome following long bone fractures and following childbirth. Suggested mechanisms include fat embolism, leading to arterial occlusion, or angiospasm. Treatment with high dose steroids has been advocated but evidence for efficacy is limited. Only a few case reports exist of development of Purtscher's retinopathy following delivery in pregnant women without pre-eclampsia.

Dr. MAHESH PALANIVELU

MBBS, DO, DNB

Ophthalmologist

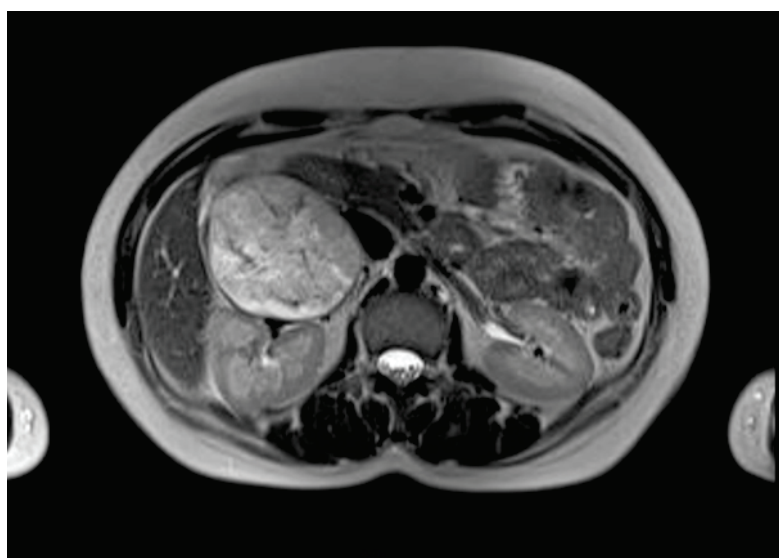




Mystery of Headache Unravelled

A 32 year old female admitted to emergency department with complaints of severe headache. On evaluation, she was found to have high blood pressure. CT brain was done to rule out other causes of severe headache and found to be normal. Later, started on antihypertensives, following workup was done to rule out secondary hypertension. Ultrasound abdomen showed mass in the region of right adrenal gland. Urinary VMA and metanephrines were found to be on the higher side. MRI abdomen suggestive of mass lesion from right adrenal gland suspicious of pheochromocytoma.

It was described as well circumscribed heterogeneously enhancing retroperitoneal mass lesion (8.7 x 7 x 6.6cm) in the right pericaval region. The mass abuts the body of right adrenal gland. The medial and lateral limbs appear intact. The mass showed washout in the

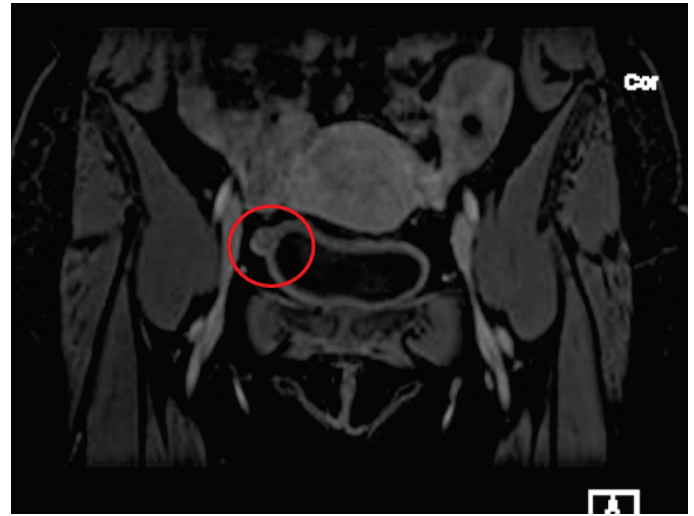
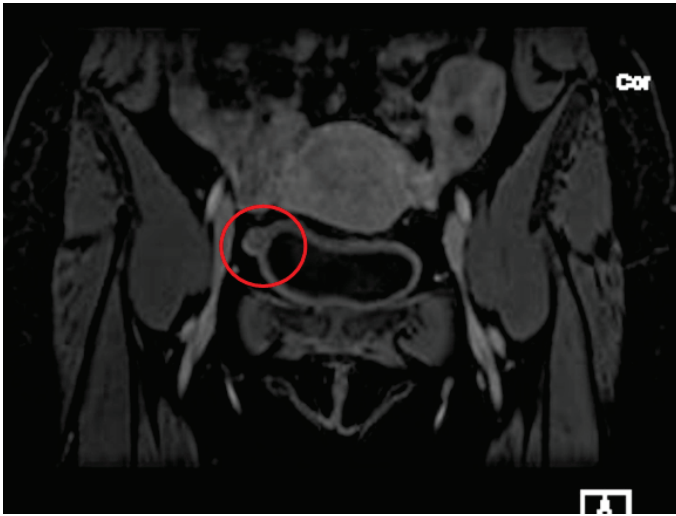


delayed scan. No fat component within the mass. No suppression in out phase images. The mass displaced the gallbladder and duodenum anteriorly. The pancreas head and inferior vena cava were displaced anteromedially. The mass indented the right kidney and right lobe of liver. The right renal artery and right renal vein were posterior to the mass lesion. Left adrenal gland was normal.

MRI neck was done to rule out other paragangliomas and was found to be normal. After controlling the blood pressure with 3 antihypertensives Patient was taken up for open adrenalectomy. Post operative period was uneventful. In the follow up blood pressure was found to be still on the higher side and was in need of antihypertensive medications.

Further evaluation with whole body FDG PET CT scan was done to rule out paragangliomas of other regions, which showed FDG avid nodular lesion measuring 1.6x1.1cms was seen in right anterolateral wall of urinary bladder (SUV max - 7.6). No perivesical fat stranding. Fat plane with right external iliac vessels are intact.

MRI PELVIS WITH GADOLINIUM CONTRAST WAS DONE which revealed A T2 hyperintense lesion of size 1.3 x 1.3 x 1cms in right lateral wall of urinary bladder (superior and anterior aspect). The lesion is intramural. There was no intraluminal extension. There was no perivesical infiltration.



Patient was taken up for open partial cystectomy. Surgery went on well and patient recovered completely. Patient was on regular follow up for the past 2 years she is doing well and appears without any antihypertensives. Young people with Pheochromocytoma are needed to be screened for paragangliomas in other regions particularly the urinary bladder. Genetic screening is also to be done

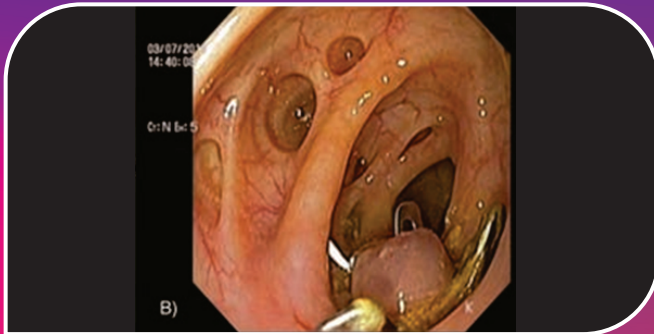
for RET, VHL, MEN 2 genes. Genetic screening was done for this patient. It was positive for RET proto oncogene. Hence, her children is also to be screened for the same. This patient was treated by team of doctors comprises of Dr.P.Kathamuthu (Consultant Urologist), Dr.KrishnaShankar (Endocrinologist), Dr.R.Palanisamy (Urologist), Dr.Ganeshprasath (Urologist), Dr.AnandBharadhan (HPB Surgeon).

Dr.P.KATHAMUTHU

MS, DNB (Urology), MRCS.,DNB (Uro.),MRCS(Edin)

Consultant Urologist





Novel Endoscopic Management of Colovesical Fistula Secondary to Colonic Diverticular Disease

Introduction: Colovesical fistula (CVF) is a pathological communication between colon, usually sigmoid colon and urinary bladder dome. The incidence of CVF is estimated to be 2 to 4% with male to female ratio of 3:1.1. The main cause of CVF is complicated diverticular disease in 65 to 79% of cases, followed by advanced colonic and bladder cancer and Crohn's disease. CVF is suspected clinically based on pathognomonic features such as pneumaturia, fecaluria, and recurrent urinary tract infection (UTI) but can be confirmed by cystoscopy, sigmoidoscopy, barium enema, computed tomography (CT), or magnetic resonance imaging.

The treatment of choice for CVF is resection and anastomosis of the involved bowel segment and closure of the bladder either by laparotomy or laparoscopy. Conservative treatment is reserved to highly selected patients who are unfit for surgery. The development of novel mechanical endoscopic closure systems allows for minimally invasive management of CVF. Only a few cases of endoscopic management by clip closure have been described in the literature. Here, we report a case of CVF, which was successfully managed with over-the-scope clip (OTSC) in collaboration with urologist and medical gastroenterologist.

Clinical Profile: An 86-year-old gentleman with a history of uncontrolled diabetes mellitus, hypertension, and ischemic heart disease was presented to us with complaints of pneumaturia, recurrent UTI, and occasional passage of feculent material in urine for the last 7 months. Clinical examination was unremarkable except for mild tenderness in the lower abdomen. Investigations showed marked leucocytosis, plenty of pus cells in the urine, and urine culture reported *Escherichia coli* growth with significant colony count.

Ultrasound scan of abdomen demonstrated some echogenic material in the urinary bladder and an inflammatory mass in the left iliac fossa. For the

better delineation of the pathology, we proceeded with contrast-enhanced CT scan of the abdomen that showed diverticulosis of the sigmoid colon with a CVF (Fig. 1).

Patient was a very high-risk candidate for anesthesia and his relatives were not willing for surgery due to the risk. But in view of recurrent symptoms, he was planned for OTSC closure of fistula. Unfortunately, due to multiple adjacent diverticula, the exact location of fistulous opening in the colon could not be identified.

Then with the help of 20 Fr cystoscope, a 0.28-inch Terumo hydrophilic guide wire was passed through the opening in the bladder to the sigmoid colon by the urologist. With an adult flexible colonoscope (12.8 mm with 3.2 mm channel width), a 14/6t size OTSC (Ovesco Endoscopy GmbH, Tuebingen, Germany) was deployed exactly over the fistulous opening by the gastroenterologist (Fig. 2).

Antibiotics were continued, fecaluria and pneumaturia were settled down and he was discharged after 1 week. Urine culture was sterile at 1 month postprocedure and he became symptom free at 18 months.



Fig.1 Contrast-enhanced computed tomography scan of abdomen showing diverticulosis of the sigmoid colon with a colovesical fistula (arrow).

Discussion: Enterovesical fistula is a pathological communication between bowel and urinary bladder of which CVF is the most common type with incidence of 2 to 4%. The occurrence of CVF is more in male patients when compared with female with a ratio of 3:1. This variation could probably be due to the protective effect of uterus in females by acting as barrier between rectum and bladder. Most commonly, CVF develops as a complication of diverticular disease in 65 to 79% of cases. In 10 to 15% of cases, CVF is due to advanced colorectal carcinoma. Other causes are Crohn's disease (9.1%), surgical trauma (3.2%), and radiotherapy (3%). The diagnosis of CVF is primarily based on clinical evidence. Most common clinical manifestation is pneumaturia reported in 50 to 70% of cases, followed by fecaluria in 51%, dysuria in 45%, frequency in 45%, urgency and suprapubic pain. Low intravesical pressure favors flow of fecal microbiota into the bladder causing recurrent UTI (45%), hematuria (22%), and orchitis (10%). CT with both oral and intravenous contrast is the most sensitive investigation to detect CVF with diagnostic accuracy of 90 to 100%. Other investigations include barium enema, cystography, cystoscopy, and colonoscopy. Surgery is the treatment of choice for CVF. The choice of surgery depends on site and etiology as well as the patient's general condition. The standard surgical strategy consists of resection of the involved bowel tract including fistula, primary or delayed anastomosis, and closure of the bladder either by open approach or by laparoscopy⁶ in patients who are unfit for major surgery due to poor overall health, patients who are unable to tolerate general anesthesia, or in oncologic patients with short life expectancy. A trial of medical therapy including bowel rest, total parenteral nutrition,

antibiotics, steroids, immunomodulatory drugs, and urethral catheter drainage or palliative loop colostomy may be warranted. Morbidity from surgery ranges from 25 to 34%, with a 4.5 to 20% of perioperative mortality,⁹ which has prompted a search for nonsurgical options like fibrin glue to occlude the fistulous tract,¹⁰ cautery probe through a specialized cystoscope to coagulate the bladder mucosa around a fistula. But according to literature, all these methods are effective mostly in upper gastrointestinal fistulas. Due to poor blood supply of colon and due to surrounding inflammation, the treatment of CVF is very difficult and surgery is the gold standard treatment. Currently, the indications for treatment with OTSCs are primary or postinterventional bleeding in the gastrointestinal tract, closure of iatrogenic full-thickness or covered perforations. Even though more expensive than other methods, OTSC can be safely and effectively employed for the treatment of CVF in patients who are unfit for surgery. But its success depends on the exact localization of the fistulous opening. A few cases of endoscopic closure of the colonic side of a CVF using through-the-scope or OTSC have been described in the literature.

Conclusion: We are reporting this case to make the surgical community aware about this previously less described collaborative approach among surgeons, urologists, and gastroenterologists. This combined endoscopic approach, which could be the first to be reported from India, is found to be a safe and effective alternative in patients who are unfit for surgery. However, further studies are needed to validate the potential benefits of this novel endoscopic management.



Dr.M.MURUGESH

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Consultant Medical Gastroenterologist & Hepatologist



Dr.GANESH PRASAD

MBBS, MS, MRCS(EDIN), MCH(Urology)

Consultant Urologist

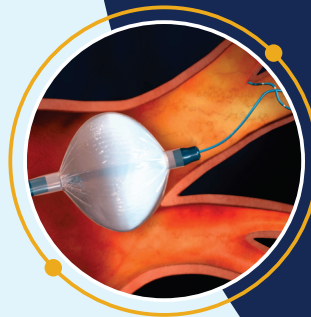
New Heart Treatment Launched at Sri Ramakrishna Hospital - 20.03.2024



The state of the art Cardiac Cryoablation Catheter System was launched on 20.03.24 to treat a serious heart disease called Arrhythmia.

The system was launched by Managing Trustee of SNR Sons Charitable Trust Shri. D.Lakshminarayanawamy in the presence of the Joint Managing Trustee Shri. R.Sundar, CEO Shri. C. V. Ramkumar and Prof. Claudio Tonto, Professor of Cardiology, Monzino Cardiology Center, Italy and Medical Director Dr.Rajagopal, Medical Superintendent Dr.Alagappan, the Cardiology Department experts Dr.Balaji, Dr.Manoharan, Dr.Vickram Vignesh, Dr.Nandakumar and Dr.Madeshwaran.

Cryoablation is a minimally invasive procedure that treats Atrial Fibrillation (AF) by freezing heart tissue that causes an irregular heartbeat. During the procedure, the doctor inserts a catheter through a blood vessel and guides it to the heart. The catheter has an inflatable balloon at the end that contains a special gas coolant that freezes the tissue. The cold energy destroys the tissue and restores a healthy heart rhythm.



CRYOABLATION IS FOR HEART RHYTHM



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