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INSIDE

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Assessing gap between standard recommendation and intake of predialysed CKD patients

- a pilot study

ABSTRACT

Chronic kidney disease patients are malnourished due to poor food intake, hormonal disturbances, increased resting energy expenditure, inflammation, polypharmacy and co-morbid diseases. Malnutrition can be determined by Body Mass Index (BMI), which is a useful, easier and reliable clinical tool. It is useful in primary care setting than other anthropometric variables which have significant operator variability. In addition dietary assessment by 7 day usual dietary recall method identify patients nutrient intake and hence any discrepancy in intake and the standard recommendation can be detected and rectified since the gap between two can be very harmful and may lead to further progression of disease. The present pilot study determines malnutrition and difference in the actual intake and standard recommendation among patients.

OBJECTIVES

To assess nutritional status of CKD patients (stage II and III a) by using anthropometric measures and diet recall and to find out difference in standard recommendation and intake of CKD patients (stage II and III a).

METHOD

Pilot study was conducted on CKD patients of stage (2, 3a, 3b, 4) with mildly, moderately and severely decrease kidney function. Data was collected between time period November 2014 to January 2015 on anthropometric measurement (height, weight) and diet intake by 24 hour 7 day usual dietary recall. Digital balance and Microtoise was used to measure weight and height. Software Diet Cal was used to analyze nutrient intake.

RESULTS

30 subjects were analyzed for their anthropometric and dietary measurement. Majority of patients were obese and had comorbidities such as diabetes and hypertension which are the susceptible and initiative risk factors of CKD. It has been found that there is a variability in protein intake among all patients. In addition their calorie, potassium and calcium intake is very less and phosphorus and fat intake through diet is high when compared with standard recommendation. This suggest further investigation to know the actual compliance of patients to their diet plan.

CONCLUSION

Dietary modification, increase in physical activity is needed along with improvement in compliance for diet. Further study is needed to validate whether there is any need of restriction is potassium in diet or not.

KEY WORDS

Malnutrition, chronic kidney disease, assessment

INTRODUCTION

Chronic kidney disease (CKD) is a major public health problem worldwide (Eknoyan et al., 2004). It is defined as abnormalities of kidney structure or function, present for >3 months, with implications for health (KDIGO guidelines, 2013). It was estimated that 10-15% of the Indian population has chronic kidney disease (Bhowmik et al.,2008) which is a major causative factor of premature morbidity and mortality (Go et al., 2004; Bello et al., 2005; CKD Prognosis Consortium et al., 2010). Glomerular filteration rate (GFR) measurement is used to know kidney function. It is calculated by Chronic Kidney Disease Epidemiology Collaboration (CKD-EPI) equation. It accurately determines GFR and has been found to correlate better with long term risk of end-stage renal disease and mortality in a middle aged population (Matsushita et al., 2010). Older age, family history, low birth weight, diabetes, high blood pressure, urinary stones are some of the susceptible and initiative risk factors of CKD. In addition, risk of mortality is more in CKD patient when they are malnourished. Malnutrition is a major outcome among CKD patients which is due to high level of cytokines and metabolic acidosis which results into muscle proteolysis. It is progressive and results in increased susceptibility to infection, impaired wound healing, decreased strength and vigor, poor rehabilitation and quality of life and increased hospitalization and morbidity. It adversely affect patient's prognosis, tolerance of treatment, outcome of disease, survival and health care cost. Malnutrition can be concluded by Body mass index (BMI) and dietary intake of the patients. BMI is an index of overweight or obesity and leanness. It has direct relationship with levels of body fatness (Silva et al., 2008; Elsayed et al., 2008). Whereas dietary intake examine quantity and quality of food intake thereby calculating nutrients going through diet.

METHOD

Pilot study was conducted on CKD patients of stage (2, 3a, 3b, 4) with mildly, moderately and severely decrease kidney function. Inclusion criteria of patients were >18 years of age, on oral diet for ≥ 3months and Indian population who willingly participated in the study. Transplant, dialysis and international patients were excluded from the study. Data was collected between time period November 2014 to January 2015 on anthropometric measurement (height, weight) and diet intake by 24 hour 7 day usual dietary recall. For weight assessment digital balance was used. Patient was weighed with minimal light clothing and without shoes (Wadhwa and Sharma, 2006). Microtoise was used to take the height of the patients. All precautions were taken to avoid subjective bias. Using height and weight measurements, BMI was calculated which is body weight divided by squared height (kg/m2) and compared with the standard cut off points of Asians. It categorized patients as underweight, normal, overweight, obese and morbidly obese (Ottery, 1995). For Dietary data patient was interviewed for usual 7 day dietary recall. This method quantify diet and remind patient of his/her food intake on the previous days (Van Staveren et al., 1985; Posner et al., 1987; Blair, 1992; Liu et al., 1992; Iannotti et al., 1994; Bialostosky et al., 2002; Dwyer et al., 2003). Software Diet Cal was used to analyze dietary data. Reliability and validity of instruments were given extreme importance. Ethical approval was taken from institutional ethics committee of the hospital, prior to collection of data.

RESULTS

The given pilot study enrolled 30 Indian CKD patients of stage 2 (23%), 3a (7%), 3b (40%) and 4 (30%) as given in figure 1.

The mean age of the sample was 53.73 years with age ranges from 20 to 75 years. Among sample group, 16 (53%) were males and 14 (47%) were females. Their education represent subject group as 53% graduate, 17% post graduate, 13% below secondary, 10% senior secondary and 7% secondary qualified. Their mean height and weight was 166.25 cm and 77 kg with mean BMI 27.84 kg/m2

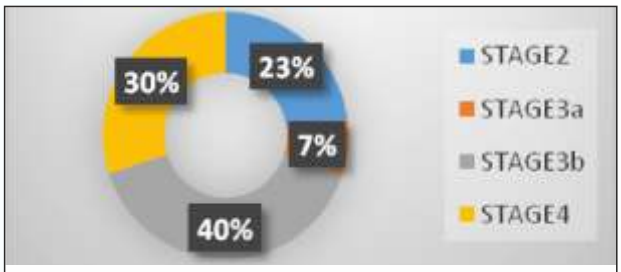

Figure 1: Percentage of patients in stage 2, 3a, 3b, 4

According to patient's BMI's as given in figure 2 they were considered as underweight (3%), normal (13%), overweight (13%), obese (43%), severe obese (10%) and morbid obese (17%).

Comorbidities among patients were Diabetes n=20 (67%), cardiovascular disease (CVD) n=6 (20%), hypertension n=20 (67%) and renal stones n=5 (17%) as given in figure 3.

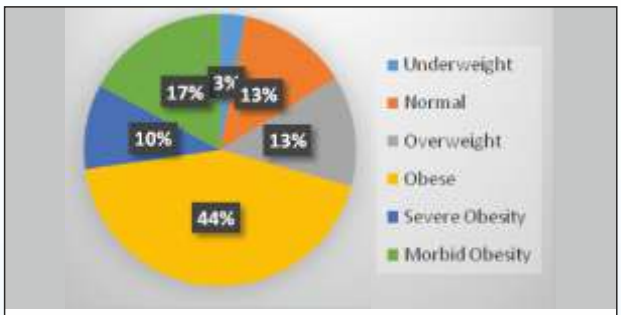

Figure 2: Percentage of patients in different bmi ranges

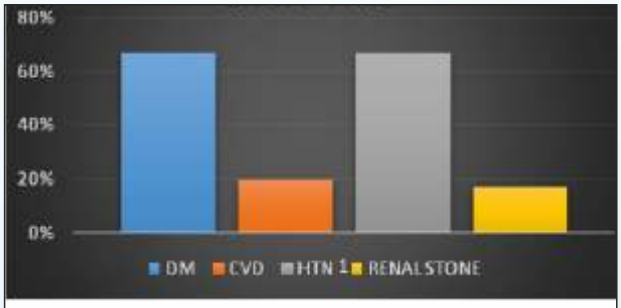

Figure 3: Comorbidities among ckd patients

The mean nutrient intake of patients as calculated by Diet Cal software: Energy 1292 kcal, Protein 39.5 gm, Carbohydrate 181 gm, Fat 44 gms, Calcium 603 mg, Phosphorus 1046 mg and Potassium 1199mg.

Table 1: Study Patient's Characteristics

Patient's characteristics		Number (%)
Stage	2	7 (23%)
	3a	2 (7%)
	3b	12 (40%)
	4	9 (30%)
Mean age		53.73 years
Gender	Males	16 (53%)
	Females	14 (47%)
Educational Qualification	Below	4 (13%)
	Secondary	2 (7%)
	Senior secondary	3 (10%)
	Graduate	16 (53%)
	Post graduate	5 (17%)
BMI	Underweight	1 (3%)
	Normal	4 (13%)
	Overweight	4 (13%)
	Obese	13 (43%)
	Severe obese	3 (10%)
	Morbid obese	5 (17%)
Case history	Diabetes	20 (67%)
	CVD	6 (20%)
	Hypertension	20 (67%)
	Renal stones	5 (17%)
Nutrient intake	Energy	1292 kcal
	Protein	39.5 gms
	Carbohydrate	181 gms
	Fat	44 gms
	Calcium	603 mg
	Phosphorus	1046 mg
	Potassium	1199 mg

DISCUSSION

In the pilot study of 30 patients, prevalence of CKD patients in stage 3b with GFR 44-30 ml/min/1.73 m2 was high, followed by stage 4, 2 and 3a. Patient's anthropometric assessment was taken which clearly classify them as obese with mean BMI 27.84 kg/m2. Only one patient was underweight, 4 among 30 patients had normal weight for height, 4 patients had 10% extra weight when compared with ideal body weight, 8 patients had severe and morbid obesity which requires immediate weight management whereas majority of patients were obese, indicating need of modification in their sedentary lifestyle to physically more active routine. As per researches some people are more likely than others to develop CKD. Those are with diabetes, hypertension, cardiovascular disease and renal stones. In our study there is a clear link between these comorbidities and CKD. 67% of patients had both diabetes and hypertension, 20 % had CVD and 17% had renal stones. Diabetes can cause damage to kidneys and heart, as well as blood vessels, nerves and eyes whereas high blood pressure, or hypertension in CKD patients can cause heart attacks and strokes. Regular blood sugar and blood pressure check with dietary modification can bring glycemic and BP control among patients hence prevent them from further damage of their kidneys.

Analyzing patient's nutrient intake, their mean calorie consumption was 1292 kcal which is very less then what is desired according to the KDOQI guidelines. Metabolic balance studies indicate that a diet providing about 35 kcal/ kg/ d lead to neutral nitrogen balance and maintains serum albumin and anthropometric indices. Patient's mean protein intake was 39.5 gms. Looking at patient's individual intake in figure 4, there is marked variation in protein intake among patients.

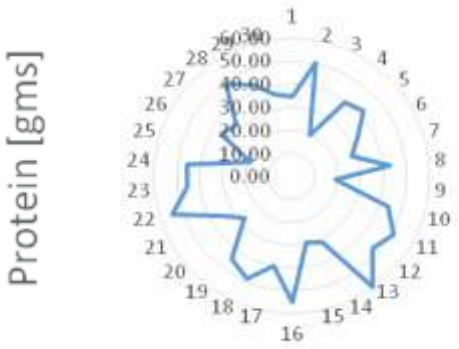

Figure 4: Variation in protein intake

A lower protein intake is desired to slow progression and minimize accumulation of uremic toxins. It retard the progression of renal failure by reducing the generation of nitrogenous wastes and inorganic ions, which cause many of the clinical and metabolic disturbances characteristic of uremia. But very low protein intake is also not suggested since it can result in malnutrition and negative nitrogen balance. Therefore protein should be taken according to one's kidney filteration rate. On comparing patient's intake with standard recommendations, there is a significant difference in other nutrient intake as well. As per standard recommendation, nutrient intake for predialysis patients should be Fat: 25-30 % of energy from fat, Calcium: 1400-1600mg, phosphorus: 900 mg (highest value taking patient weight 90 kg), potassium: 1560-2730mg. In our study patient is taking high fat (mean fat%= 31%) and high phosphorus (mean P= 1046 mg) diet. High fat intake put patient in CVD risk whereas high phosphorus can cause body changes that pull calcium out of your bones, making them weak. It can also lead to dangerous calcium deposits in blood vessels, lungs, eyes, and heart. Mean calcium (ca=600mg) and potassium (K= 1046 mg) intake was also found lower than the recommendation. This emerges a need to supplement diet with calcium tablets and a question on whether potassium restriction is required in predialysis patients or not. Further research can be done to validate the finding of pilot study.

CONCLUSION

CKD is a major public health problem. Major outcome of this disease is malnutrition which can be detected by various markers. Dietary modification with increase physical activity can help in reducing the comorbidities as well as the outcome of CKD. The main goals for CKD patients should be maintenance of good nutritional status, minimizing uremic toxicity and the metabolic derangements and retarding the rate of progression of renal failure. Dietary compliance among patients should be facilitated by using dietary counselling techniques that motivate patients to change and comply with dietary recommendations, rather than the more traditional approach of information-giving. To facilitate compliance, creative menu planning should be encouraged, taking into consideration the patient's food preferences. Foods, beverages, and nutritional supplements with high energy density may be used.

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It's a battle worth fighting

- a cancer survivor's story

Cooking, studying, aerobics—all this and more kept this cancer survivor from giving up, and helped her deal with the toughest period of her life

BATTLING IT OUT: Archana Kapoor, a cancer survivor, says her two children were her greatest support system. **PHOTO:** Pradeep Gaur/Mint

Until 10 July 2013, Archana Kapoor, then 39, gymmed and exercised four times a week. She was completing her BEd degree and worked with her husband in his office, managing the administration. That July morning, she felt a small hard bump on her neck, near the collar bone. No stranger to cancer—Kapoor lost her father to lung cancer in 2005, and her elder sister to colon cancer in 2010—she scheduled a check-up immediately. "My sister had delayed getting checked up, ignoring her symptoms for three months, and her cancer spread very fast. We couldn't save her. She was just 37," she says. "Keeping this history in mind I was quick to seek help." An FNAC test (fine needle aspiration cytology) confirmed her fears; she was diagnosed with one of the rarest forms of kidney tumours, transitional cell carcinoma, or TCC. Further tests (a PET/CT scan) indicated that her cancer was a fast-spreading type and had spread to multiple lymph nodes, from the neck all the way down to the lower abdomen and bones. Kapoor's left kidney was severely infected and she had to have 5-hour-long surgery to get it removed. Chemotherapy sessions began on 30 July. "I am a strong person, my patience level is unusually high, but that first month was really bad. I was fearful all the time, really, really scared of dying, and just broke down," she recalls. Keeping in mind her family history, her young age, and the fact that her cancer was not a very common one, her oncologist, Nitesh Rohatgi (senior consultant medical oncology, Max Super Speciality Hospital, Saket, New Delhi), referred her for genomic testing to Amit Verma, consultant, molecular oncology and cancer genetics, at the hospital. Dr. Rohatgi and Dr. Verma even set up sessions with a psychologist to help her though this period. Eventually, she says, her children—a 16-year-old daughter and 10-year-old son—helped her come out of depression. "Though they had instructions to stay away (for fear of infecting me), they would stand at the door and talk to me, edging me to eat, talk, basically buck up." All through this period Dr. Rohatgi was available 24x7. When I decided to fight once she was back home, Kapoor says she took a conscious decision to handle things positively. "I changed overnight. I began cooking again for my children—Thai, south Indian…everything they wanted to eat. I went to see movies with them after the third cycle of chemo," she says. "I started to dress with care when going for my chemo. Why should I dress and behave like a patient? In fact, during one visit, a member of the support staff at the hospital asked my sister-in-law, who was accompanying me, who the patient was," she remembers, chuckling. Kapoor also began counselling other patients at the hospital whenever she went for her treatment. She remembers talking to a really sad, subdued lady suffering from uterine cancer. "She was depressed and was hardly eating anything except curd for some reason. I told her, "Look at me, I am eating everything and doing fine". Nine months have passed since Kapoor's last chemo session; she is in remission at present. New beginnings "I celebrated my last chemo session by dancing a lot with my children." And although she suffered a personal setback—her husband and she separated around the time her treatment was being completed—she is not letting it pull her down. Kapoor has enrolled in a postgraduation programme in public administration and intends to use her earlier qualifications (postgraduation in economics and BEd) to begin teaching at a school soon. She has begun aerobics lessons at a local gym. "My main struggle has just started as I am trying to get a job at this age and studying alongside. It is a big challenge but I feel up to it. I have decided to take care of myself and stay optimistic," she says. Given her family history, she has decided to get her children genetically tested for any cancerous mutations too. Staying alive Kapoor says she wants to spread the message of positivity and urge cancer patients to not let the disease get the better of them. She intends to go to support groups for cancer patients (see box) and share her experience. "My support group was my family and neighbours, but some people might not have anyone to help them through this tough and lonely battle. I want to tell them that this battle is worth fighting. I also want other people to know early detection really is the key to combating cancer."

HELP AT HAND

A list of support groups cancer survivors can turn to

- **Can Support (New Delhi)**
  www.cansupport.org It provides home care, palliative care to patients, subsidized sup-portive medication and equipment, and counsel - ling services **Contact the helpline (Monday-Friday, 930am-530pm) at 011-26711212 or email at helpllne@cansupport.org.**

- **Cancer Patients Aid Association (CPAA) (New Delhi Mumbal and Pune)**
  www.cpaaindia.org It works in the field of patient care, aid and assistance, awareness and advocacy. Some of the branches give finan-cial assistance, counsel-ling and guidance to patients and their fami-lies for the entire dura-tion of the treatment. Contact them in New Delhi at 011-26270470;in Mumbai at 022-24927007; and in Pune at 020-32500350.

- **YwiajStagh Foundation* (YSRs) you We Can MtfcrtJw (NewDeM)**
  www.youwecan.com It creates awareness about cancer, its preven-tion, and works towards raising funds for those who need them. Contact them at Info(3youwecan.com or call or email Prashant Pal (9990326040; prashantpali? youwecan.com).

- **Can-Stop (Chennal)**
  www.canstop.org It provides counseling services to patients, family and friends, and conducts awareness programmes and screening camps. Contact them at 9941007688 or email canstop.smf@gmail.com

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Minimally invasive organ removal

Laparoscopic live donor nephrectomy with vaginal extraction

ABSTRACT

We report a case of left-sided laparoscopic live donor nephrectomy with extraction of the kidney through the vagina.

INTRODUCTION

The laparoscopic approach was designed to remove disincentives to donation by reducing the impact of the procedure on the donor's life. In laparoscopic donor nephrectomy, 5–6 cm abdominal incision is given for intact kidney extraction. In addition to its cosmetic appearance, this incision can be the source of postoperative pain and potential complications. Eliminating this incision will further reduce the magnitude of the operation and lead to a more rapid recovery with fewer complications.

CASE REPORT

The patient is a 50 year old female who volunteered to donate to her 27 year old daughter who had end-stage renal disease. The donor had complete uterine prolapse. A multidisciplinary team consisting of an urologist, gynaecologist and nephrologist evaluated and counselled the patient regarding transvaginal kidney extraction followed by vaginal hysterectomy.

Patient underwent a laparoscopic left-sided donor nephrectomy with vaginal extraction of the donor kidney and vaginal hysterectomy thereafter. Broad-spectrum antibiotics were given and the vagina and perineum were scrubbed and prepped using Betadine solution. The patient was placed in a right-side down modified flank position with left leg up and pneumoperitoneum was established. Ports' position is as shown in Figure 1. The pelvis was then examined for any adhesions.

Figure 1. Port's position

The transabdominal laparoscopic donor nephrectomy was performed. The ureter was cut and the kidney was freed from all attachments except the single renal artery and vein. A Betadine preparation of the vagina was repeated and a sponge stick was

introduced and positioned in the posterior fornix to aid in laparoscopic visualization of the vaginal cuff. A transverse posterior colpotomy measuring approximately 15 mm in size was

created at the apex of the posterior fornix, just to admit 15mm trocar with endocatch bag (Figure 2). At this point, an endocatch bag was placed into the peritoneal cavity via the vagina, visualizing it constantly through laparoscopic camera (Figure 3).

Figure 2. Endocatch bag through vagina into peritoneal cavity

Figure 3. Endocatch bag inside the peritoneal cavity

Artery and vein were sequentially ligated with a Hemolok 10mm clip and cut. The kidney was placed into the endocatch bag and retrieved via the vagina after extending posterior colpotomy uneventfully (Figure 4a and 4b). The bag was opened and using a fresh pair of gloves the kidney was removed from the bag without touching the outside and was flushed. Total ischemia time was 4 mins and the specimen was intact with adequate length on the ureter, renal artery and renal vein. Vagina was packed to create pneumoperitoneum. Hemostasis was confirmed and the port sites were closed in standard fashion. Vaginal Hysterectomy was than done by Dr. Anita Sharma.

Figure 4: (a) Kidney in endocatch bag

Figure 4: (b) Donor kidney after removal

Total operative time was 160 mins. The donor did not have the pain normally associated with the lower abdominal incision. The vaginal pack was removed on postoperative day 1. She was able to resume normal activity 2 days following the procedure and related no difficulty with bowel or bladder function. She had no infectious complications. Patient was allowed to resume sexual activity 4 weeks after surgery. The final cosmetic result was excellent. The recipient had prompt renal function and the serum creatinine fell to 1.2 on postoperative day 2. The current serum creatinine is 1.0 with 3 months follow-up. The post-transplant course has been uneventful; specifically there has been no evidence of infection or rejection.

DISCUSSION

Technical refinements resulting in decreased morbidity associated with donor nephrectomy may reduce barriers to kidney donation and increase the pool of willing donors. Vaginal extraction of an intact kidney following donor nephrectomy was first reported by Mohamad E Allaf in 2010.[1]

Concerns regarding renal/vaginal size disparity and infectious complications were discussed. To minimize infectious complications, the vagina and perineum are scrubbed and prepped with Betadine solution twice prior to opening the vagina. The patient was given intravenous Cefoperazone+sulbactum and Metronidazole antibiotics preoperatively and the extracted kidney was placed in an impermeable bag. Once extracted, the kidney is handled with fresh gloves and the outside of the bag was not touched in order to minimizethe risk of vaginal contamination of the kidney. The endocatch bag is impervious and is routinely used to extract cancerous organs without evidence of malignant seeding of the extraction sites. No change in antibiotic prophylaxis was made for the recipient.The current patient also had complete uterine prolapse further substantiating removal through vagina.Vaginal extraction is not a viable option in younger nulliparous females due to lack of vaginal laxity, patients with atrophic vaginitis, vaginal infections or large kidneys.

While we purposefully selected a uterine prolapse patient who wants vaginal hysterectomy for the initial case. In the future, we anticipate expanding our indications in other females who wants to avoid abdominal incision. Of course, a major limitation of this technique is its inherent exclusion of male patients.

CONCLUSION

Laparoscopic live donor nephrectomy with vaginal extraction may be a viable alternative to standard laparoscopic approaches in select women. Potential advantages of this procedure may encourage more individuals to consider live donation. Concerns regarding donor sexual function, mechanical factors related to renal/vaginal size disparity and recipient infection risk need to be studied further. Future comparative studies including larger patient cohorts and longer follow-up will define the ultimate role of vaginal extraction approach to donor nephrectomy.

REFERENCES

1. Allaf ME, Singer A, Shen W, Green I, Womer K, Segev DL, Montgomery RA. Laparoscopic live donor nephrectomy with vaginal extraction: initial report. Am J Transplant 2010;10(6):1473-7.


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Outcome of major digestive tract surgery in the elderly

BACKGROUND

As the life expectancy in population increases, an increasing number of elderly patients are likely to need major digestive tract surgery. These constitute a vulnerable group of patients because of many factors such as frequently associated comorbid conditions, impaired wound healing and poor tolerance towards procedure related adverse events.

Of late there have been serious attempts to define age groups particularly vulnerable to digestive tract surgery. According to one such study, the mortality risk for gastrointestinal resections starts increasing at the age of 50 years and at the age of 75 years it begins to rise very rapidly. The study reported that optimum age of 68.5 years predicts mortality with high sensitivity and specificity [1].

A recent French multicenter (47 centers) study reported a mortality of 10.6% in 1796 patients of more than 65 years age who underwent major digestive surgery. Age more than 65 years was by itself an independent predictor of mortality (odds ratio 2.21). This study further reported that age > 85 years, emergency surgery, anemia, white cell count > 10000/mm3, ASA class 4 and palliative cancer operation were independent predictors of mortality [2].

It is in this background that we evaluated the outcome of major digestive tract surgery in the elderly in our department.

PATIENTS

Consecutive surgically managed patients of more than 68 years

METHODS

Retrospective chart review

SETTING

Department of Surgical Gastroenterology at the Max Super Speciality Hospital, Saket, New Delhi

TIME PERIOD

2-year duration (2013 & 2014).

OUTCOME MEASURES

30 day procedure related mortality, reoperation and readmission.

RESULTS

Over a 2 year period, 36 patient of age 68 years or more underwent major digestive tract surgery.

A sample of our patient population, procedures performed and outcome is depicted in Table 1

Table 1. Representative data from patients (n=5)

S. No.	Age (yr) & Gender	Diagnosis	Surgery	Outcome		
				Mortality	Re-exploration	Readmission
1	93F	Perforation rectum (extraperitoneal)	Hartmann's Procedure	-	-	-
2	88F	Malignant stricture descending colon with closed loop obstruction & caecal perforation	Radical subtotal colectomy	-	-	-
3	85F	Acute gastric dilatation with necrosis of gastric fundus	Sleeve gastrectomy	-	-	-
4	74M	Perforated gastric cancer	Distal gastrectomy (palliative)	-	-	-
5	72M	Fulminant ulcerative colitis with shock	Subtotal Colectomy	-	-	-

Of these 36 patients, 3 died resulting in an operative mortality of 8.5%. No mortality was ascribable to procedure related complications. There was 01 re-exploration (3.5%) and no readmission within 30 days of discharge respectively. The details are provided in Table 2.

Table 2. Outcome of surgery in elderly (n=36)				
Parameter	Number	Mortality (%)	Re-exploration (%)	Readmission (%)
Age > 68 years	**36**	**3(8.3)**	**1(2.7)**	**0**
- Elective	15	0	1	0
- Emergency	21	3 (16)	0	0
Age group 68-80 years	**28**	**1(3.5)**	**1 (3.5)**	**0**
Age group 81-93 years	**8**	**2 (25)**	**0**	**0**
Major surgery*	**32**	**3(9.3)**	**1(3.1)**	**0**
68 – 80 years	**24**	**1(4.1)**	**1(4.1)**	**0**
- Elective	12	0	1(8.5)	
- Emergency	12	1(8.5)	0	0
81-93 years	**08**	**2(25)**	**0**	**0**
- Elective	03	0	0	0
- Emergency	05	2(40%)**	0	0

Of these 36 patients, 3 died resulting in an operative mortality of 8.5%. No mortality was ascribable to procedure related complications. There was 01 re-exploration (3.5%) and no readmission within 30 days of discharge respectively. The details are provided in Table 2.

CONCLUSION

In specialized units at tertiary care centers, major digestive tract surgery in the elderly can be performed with results comparable to best of centers in the West

REFERENCES

1. *Kurian AA, Wang L, Grunkemeier G, Bhayani NH, Swanström LL. Defining "the elderly" undergoing major gastrointestinal resections: receiver operating characteristic analysis of a large ACS-NSQIP cohort. Ann Surg. 2013;258 (3):483-9.*
2. *Duron JJ, Duron E, Dugue T, Pujol J, Muscari F, Collet D, Pessaux P, Hay JM. Risk factors for mortality in major digestive surgery in the elderly: a multicenter prospective study. Ann Surg. 2011;254 (2):375-82.*



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Utility of cardiac magnetic resonance imaging in evaluating left ventricular aneurysm

BACKGROUND

Left ventricular aneurysm (LVA) is defined as circumscribed, thin-walled, non-contractile out-pouching of the ventricle [(1)]. True aneurysm of left ventricle (LV) develops after completed myocardial infarction resulting in the out-pouching of thinned and scarred myocardium which becomes dyskinetic in systole. LV aneurysms predispose to thrombo-embolism, congestive cardiac failure, and ventricular arrhythmias[(2)].

Figure 1. Echocardiography showing large LV aneurysm

CASE

The patient is a 65 years old man admitted to the hospital with past history of myocardial infarction treated with PTCA and now having chest pain. Echocardiography showed a large aneurysm arisingfrom the posterior-lateral wall of left ventricle measuring (70 X 65 mm) with evidence of alarge thrombus within it. (Figure 1)

Cardiac MRI (CMRI) showed a well-defined large thin walled aneurysm arising from posterior-lateral wall of left ventricle measuring 70x64 mm size with a large thrombus in it (Figure 2 and 3). The aneurysm showed paradoxical movement. There was delay in contrast delivery in the aneurysmal wall as seen in resting perfusion. Delayed contrast MRI showed trans-mural enhancement of the aneurysmal wall (Figure 4). Rest of the myocardium showed no delay enhancement consistent with viable myocardium.

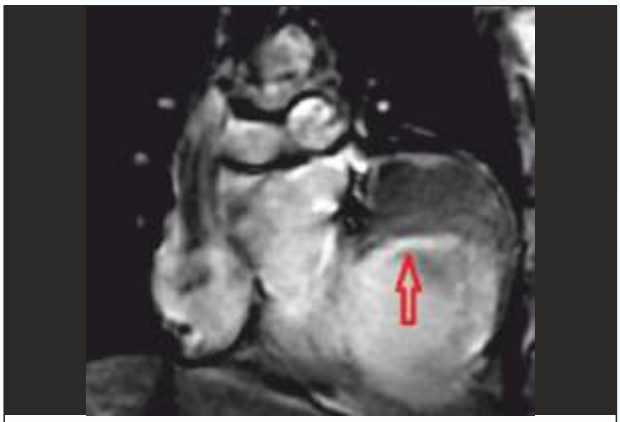

Figure 2. Two and Four chamber image showing Left ventricle large aneurysm arising from its posterio-lateral wall. A large clot is noted in the aneurysm

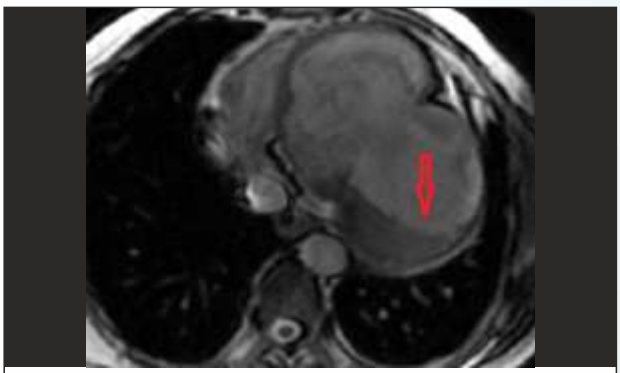

Figure 3. Two and Four chamber image showing Left ventricle large aneurysm arising from its posterio-lateral wall. A large clot is noted in the aneurysm

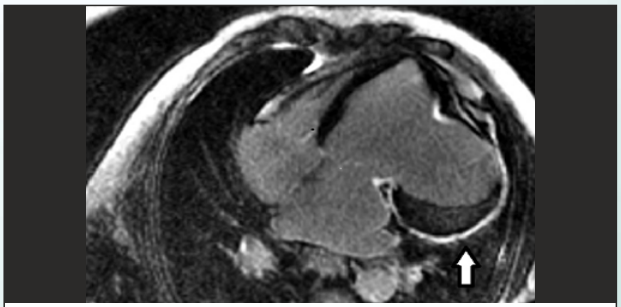

Figure 4. Delayed contrast MRI 4 chamber image showing trans mural enhancement of the aneurysmal wall and no enhancement inrest of myocardium

Cardiac MRI (CMRI) showed a well-defined large thin walled aneurysm arising from posterior-lateral wall of left ventricle with a large thrombus in it. The aneurysm showed paradoxical movement. Delayed contrast MRI showed trans-mural enhancement of the fibrotic aneurysmal wall. Rest of the myocardium was viable.

DISCUSSION

Transthoracic echocardiography plays an important role and provides assessment of LV structure and function, however, inferior wall aneurysm can be difficult to visualize particularly in patients with sub-optimal image quality. In patients with poor acoustic windows, contrast echocardiography is useful in identifying presence of aneurysm. Transoesophageal echocardiography has a limited role due to its semi-invasive nature and the availability of superior non-invasive imaging modalities like cardiac MRI and CT[3].

Cardiac CT offers complementing information regarding the anatomy of aneurysm as well as that of coronary arteries, though at an expense of ionizing radiation. Cardiac MRI provides a comprehensive assessment of the morphology of the aneurysm and adjacent myocardium. Furthermore, it demonstrates the continuity of the myocardial wall, thus differentiating between a real and a pseudo- aneurysm. If surgical repair is being considered, the identification of viable myocardium is important and tissue characterization by MRI delivers additional key information not available with other techniques. Furthermore, the dynamic nature of MRI scanning and its ability to quantify LV ejection fraction, LV volumes, and mitral regurgitation allow operative planning and appropriate risk stratification[2].

Management of aneurysm largely depends on presenting symptoms and nature of aneurysm i.e. true aneurysm or pseudoaneurysm. Perceived high risk of spontaneous rupture associated with pseudoaneurysm and its catastrophic consequences dictate urgent surgical repair whereas true LV aneurysm can be managed both surgically and medically. Medical management focuses on reducing the risk of embolism and treating underlying congestive cardiac failure. The aim of surgical therapy is restoration of LV geometry, LV volume reduction, and the relief of ischemia by CABG in the presence of concomitant coronary artery disease in viable myocardial territory[4].

REFERENCES

1. *Hamer DH, Lindsay J, Jr. Redefining true ventricular aneurysm. Am J Cardiol 1989;64:1192-4.*
2. *Heatlie GJ, Mohiaddin R. Left ventricular aneurysm: comprehensive assessment of morphology, structure and thrombus using cardiovascular magnetic resonance. Clin Radiol 2005;60:687-92.*
3. *Haddadian B, Jan MF, Paterick TE, Khandheria BK, Tajik AJ. Multimodality imaging of left ventricular aneurysm: tools of the trade. Eur Heart J Cardiovasc Imaging;13:629.*
4. *Toker ME, Onk OA, Alsalehi S, et al. Posterobasal left ventricular aneurysms: surgical treatment and long-term outcomes. Tex Heart Inst J; 40:424-7.*

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Women power at the APHRS 2014!!

As dusk set in on the first day of APHRS 2014– India, the session of Women in EP closed the day with splendor. Though Women form a very small part of the Electrophysiology domain which is otherwise a male dominated profession, it brought out mixed feelings of pride as well as concern in the session participants. The issue of encouraging women to take-up this line of career was also discussed.

"It's a matter of Passion for Cardiac Electrophysiology to make a choice of this branch of Cardiology as a career and demands commitment" said Dr. Vanita Arora a leading electrophysiologist from India and the "Director" of Forum of Women in EP. Dr. Arora expressed her pride on being a part of the Electrophysiology industry and also for being a Woman. She insisted on the fact that this forum would add a voice to all challenges and concerns faced in shaping their career by women in this very intellectual branch of cardiology.

Dr. Sylvia Priori bestowed light on the topic of Inherited Cardiac Arrhythmias: The Role of Genetic Testing, which was the key note of the session. She highlighted how genetics played a major role in diagnosis and identification of Arrhythmia disorders, in cases where there is a family history of the same.

It was moderated by Dr. C. Sridevi, another Woman EP from India.

After this enlightening key note, Dr. Vanita Arora led the panel discussion with the invited panelists - Dr. Surinder Kaur – *Malaysia*, Dr. Aparna Jaswal, Dr. Meera, Dr. Daljeet Singh – *India* and Dr. HS Mun - *S. Korea*. This panel was an interactive discussion between the new and upcoming Women EPs and the experienced EPs and led to their sharing experiences, concerns, issues and ways to resolve and also best practices – it was an animated & informative session which was enjoyed by the panelists and audience alike. "Guilt management can be as tough as time management for working mothers" said Dr. Priori.

"Striking a balance between personal and professional responsibilities is the key to success in this branch" added, Dr. Vanita Arora.

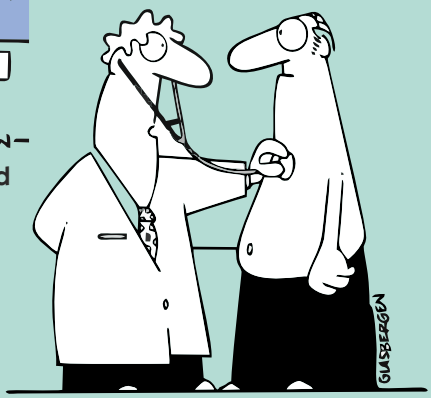
The delegates also agreed that having a woman as a mentor is far more encouraging as they share the same kind of personal and professional issues. This was followed by interactive case presentations by Dr. Niti Chadha from India, Dr. Jo-Nan Liao from Taiwan & Dr. Giselle Gevachio – Philippines.

All the invited guests, panelists & members of the audience then participated in the Wine & Cheese reception. The session ended with a feeling of bonding between the participants not only because they are in the same profession but more over because they are Women in the same profession striving hard to make it big with their EP career while balancing with personal life. Soon this forum, the Asia Pacific Women in EP will be a part of the HRS Women's forum.

Dr. Arora with Dr. Sylvia Priori

Funny Bone

"You caught a virus from your computer and we had to erase your brain. I hope you have got a back-up copy!"



"It's easy to tell the difference between good cholesterol and bad cholesterol. Bad cholesterol has an evil laugh."

"I already diagnosed myself on the Internet. I'm only here for second opinion"

*Source - Social Media

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