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INSIDE

Stereotactic Ablative Body Radiotherapy (SABR) for Inoperable, Chemorefractory Retroperitoneal Lymph Node Metastases from Embryonal Cell Carcinoma of Testis – A Case of Long Term Survivor

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INTRODUCTION

Stereotactic Ablative Body Radiotherapy (SABR) is a form of high precision radiotherapy, characterized by the use of extremely high biological doses of radiation delivered in a few fractions. In the setting of oligometastatic disease confined to Paraortic Lymph Nodes (PALN), SABR leads to high local control rates of upto 70 - 80% in patients of carcinoma Cervix, Prostate and Stomach [1-5]. Conversely, conventionally fractionated non-stereotactic radiotherapy in this setting is generally believed to attain poorer results, because the dose is limited by normal tissue tolerances of the surrounding Organs At Risk [3]. Local control rates of conventional radiotherapy in patients of carcinoma cervix with paraortic recurrence have been reported in the range of 33% to 50% [4,6].

In Non Seminomatous Germ Cell Tumors (NSGCT), the rate of para-aortic failure after Chemotherapy and Retroperitoneal Lymphnode Dissection (RPLND) is reported in approximately 12% patients [8]. However, there is no published data on the use of SABR as a modality in this situation to our knowledge.

CASE REPORT

We describe a rare case report of a 50 years old male who presented in 1994 with left testicular swelling and conglomerate of enlarged lymph nodes around left renal hilum (Largest measuring 6 x 4 cm) evident on CECT scan of the abdomen. He underwent high inguinal orchidectomy on 6.12.1994 at an outside hospital. Serum Alfa fetoprotein (380 ng/ml) and beta HCG (379 ml U/ml) were raised. Histopathology report showed non seminomatous germ cell tumour-endodermal sinus variety. Thereafter he received 4 cycles

of chemotherapy with Bleomycin, Etoposide and Cisplatin (BEP) regimen from December 1994 to April 1995.

Post chemotherapy in May 1995, the AFP and beta HCG returned to normal, while CT abdomen showed a residual (2.2 x 1.6cm) node with central necrotic area at the level of L1-L2 vertebra. Patient was kept on regular follow up with regular serum AFP and Beta HCG levels, which remained within the normal range till October 1995.

In November 1995, CT abdomen revealed an increase in size of the retroperitoneal lymph node mass (5.2 x 4.1 x 3.4cm). However the serum markers were still in the normal range. In January, 1996 a limited Retroperitoneal Lymph Node Dissection (RPLND) was done and histopathology reported as necrotic lymphnodes with reactive lymphoid hyperplasia.

Thereafter, patient remained asymptomatic with normal serum markers, till June 2003.

In July 2003, serum AFP levels rose to 600.00 ng/ml while the Beta HCG was still undetectable and serum LDH was 396 IU/L. CT scan abdomen again showed para-aortic lymph nodes of size 6.5 x 5cms, abutting the left renal vessels and left renal pelvis.

In August, 2013 he underwent Exploratory laparotomy with excision of retroperitoneal mass. Histopathology revealed mixed germ cell tumor, comprising predominantly of yolk sac variety with focal areas of embryonal carcinoma. Thereafter, he received 3 cycles of chemotherapy with BEP regimen from September 2003 to November 2003.

For the next 5 years, he remained disease free with normal serum marker levels and no abnormal findings on CT scans.

In February 2008, routine CT abdomen and chest showed 1–1.5 cm sized Lymph Node in th left para-aortic region at the level of left renal hilum. Ultrasound guided FNAC of the Lymph Node was done which revealed recurrence of Germ Cell Tumour. He was again given 3 cycles of chemotherapy with Cisplatin and Etoposide (EP) till April 2008.

An interval PET CT scan, post 3 cycles chemotherapy showed more than 50% reduction in size of retroperitoneal LN. Further, three cycles of EP based chemotherapy were given till July 2008.

Patient remained on regular follow up from August 2008 to August 2009, with PET CT and Serum markers as per Table 1

TABLE 1: Showing gradual increase in size and avidity of the retropeitoneal lymph node and the corresponding Serum AFP levels.

At this point, patient came to us for further management.

Date of PET-CT	Size of retroperitoneal LN (cm)	SUV max	AFP (ng/ml)
25.08.2008	1	1.3	6.96
08.12.2008	1.2	2.9	6.43
19.05.2009	1.75	8.1	9.26
11.08.2009	1.9	9.4	20.11
22.02.2010	3.5	9.9	45

His case was discussed in the tumour board and in view of a solitary site of disease in the retroperitoneal region which was inoperable and chemorefractory, the option of SABR was offered.

A dose of 45Gy in 6 fractions (with a biological equivalent dose of 78Gy) was delivered by VMAT SABR technique in March 2010. The treatment volume included gross nodal disease apparent on CT and PET scan with very tight margin while limiting dose to normal tissues.

The patient tolerated the treatment well and had Grade II Gastro intestinal toxicity (RTOG Acute Radiation Morbidity Scoring Criteria) in the form of on and off abdomen pains, which resolved with analgesics. Post SABR, PET CT done in August 2010 revealed regression of the Lymph nodal mass with faint FDG avidity and central necrosis. Serum AFP declined to 4.08ng/ml from the pre treatment value of 45 ng/ml.

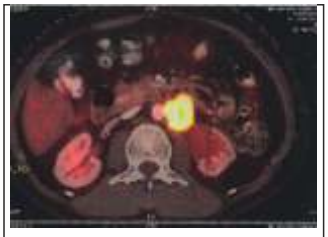

Figure 1: Graphical representation of yearly incidences of Hypoglycemia

Since then he has been on 3 monthly follow up with serum markers and PET CT scan in the first year and then CECT thereafter. Currently patient is disease free 4 years and 9 months later, with normal serum markers and no long term adverse effects.

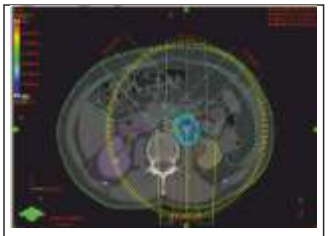

Figure 2: Showing V-MAT SABR with dose distribution

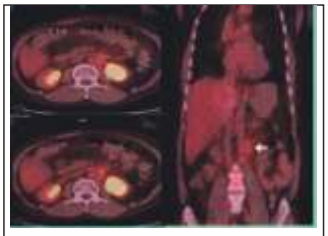

Figure 3: PET scan, 11months post SABR showing no evidence of disease

CONCLUSION

Complete remission of recurrent paraortic nodal mass with SABR in Non Seminomatous GCT, has not been reported so far. In this difficult situation of inoperable and chemorefractory PALN recurrence, SABR allows Radiation Oncologists to deliver highly precise, ablative dose of radiation. The high ablative dose to limited target volume makes SABR a potent weapon, useful even in radioresistant tumours like Non Seminomatous Germ Cell Tumours. Precise localization of the target volumes, strict immobilization, tight margins around the target and sharp dose gradient in SABR allows normal tissue sparing.

However, SABR at paraortic location is technically difficult since Organs At Risk (OAR) like small bowel loops, spinal cord, renal hilum and cortex and large vessels may lie in close proximity to these nodes and at inexperienced hands may have some morbidity.

While, in the present case SABR was tried due to the inoperability of the lesion, the possibility of its use as a salvage modality may be explored. The success of SABR in this case has given a ray of hope in the absence of other options. However, further data on its successful usage in NSGCT recurrences is warranted.

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Diagnosis of Constrictive Pericarditis by Magnetic Resonance Imaging and Correlation with Echocardiography

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The pericardium and pericardial diseases in particular have received, in contrast to other topics in the field of cardiology, relatively limited interest. Today, despite improved knowledge of pathophysiology of pericardial diseases and the availability of a wide spectrum of diagnostic tools, the diagnostic challenge remains. Not only the clinical presentation may be atypical, mimicking other cardiac, pulmonary or pleural diseases; in developed countries a shift for instance in the epidemiology of constrictive pericarditis has been noted. Accurate decision making is crucial taking into account the significant morbidity and mortality caused by complicated pericardial diseases, and the potential benefit of therapeutic interventions. Echocardiography and Cardiovascular Magnetic Resonance (CMR) are definitely the most versatile modalities to study the pericardium. It fuses excellent anatomic detail and tissue characterization with accurate evaluation of cardiac function and assessment of the haemodynamic consequences of pericardial constraint on cardiac filling. This review focuses on the current state of knowledge how CMR and Echocardiography can be used to study the most common pericardial diseases.

A Nigerian patient came with history of breathlessness, pedal edema and ascites for two months. Patient has decreased urine output, with h/o weight loss for 1 month. Patient has h/o smoking and alcohol intake for past 10 years.

Echocardiography was done which showed markedly irregular thickened pericardium with pericardial effusion (Figure 1). There was septal bouncing with respiration. Doppler evaluation was done which was suggestive of constrictive pericarditis (Figure 2 & 3).

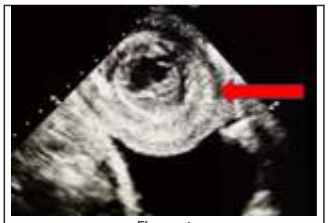
Figure 1

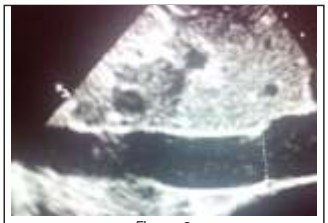
Figure 2


Figure 3

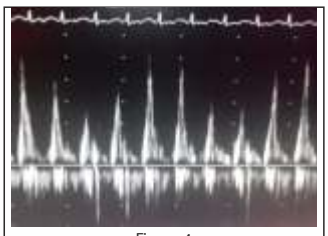
Figure 4

Patient was advised for Cardiac MRI for further evaluation. Initially Non Contrast CT scan was done to rule out calcification which showed extensive pericardial thickening. However there was no evidence of pericardial calcification. B/L pleural effusion was noted. Lung window showed left lung basal consolidation.

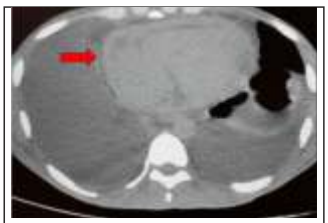
Figure 5: Non Contrast CT scan showing extensive pericardial thickening, B/L pleural effusion and no evidence of calcification

Cardiac MRI was done which showed following findings:

- Irregularly thickened pericardium measuring maximum up to approx. 25 mm at atrio-ventricular groove. There was minimal pericardial effusion.
- Contrast images showed diffuse homogenous enhancement of the pericardium. The thickened pericardium was adherent to myocardium. There was associated marked bilateral pleural effusion.
- LV and RV regional function reveals reduced LV systolic function. Both RV and LV were relatively smaller in size and both atria were prominent. Cine images showed septal bouncing of LV septum. There was global hypo kinesia of left and right ventricular wall.
- Qualitative analysis showed reduced left ventricular systolic function.

Over all features were suggestive of constrictive pericarditis.

Figure 5, 6 & 7: Patient then undergone pericardiectomy in our hospital. Pericardium was tubercular as suggested by histopathology

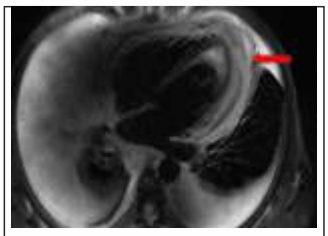
Figure 6

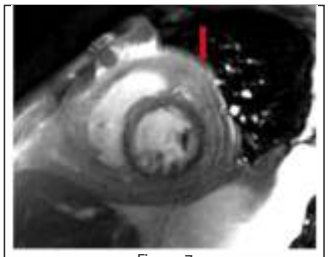
Figure 7

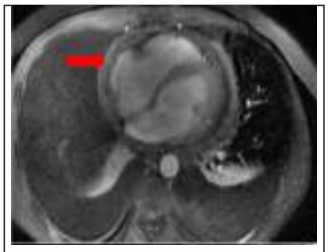
Figure 8

CONCLUSION

Constrictive pericarditis is a potentially reversible cause of heart failure that may be difficult to differentiate from restrictive myocardial disease and severe tricuspid regurgitation. MRI and Echocardiography provides an important opportunity to evaluate for constrictive pericarditis, and definite diagnostic criteria are needed.

Echocardiography is very sensitive, specific, rapid and cost-effective non-invasive investigation for diagnosing pericardial effusion. Echocardiography may allow differentiation of constrictive pericarditis from heart failure due to restrictive myocardial disease or severe tricuspid regurgitation. Respiration-related ventricular septal shift, preserved or increased medial mitral annular e' velocity, and prominent hepatic vein expiratory diastolic flow reversals are independently associated with the diagnosis of constrictive pericarditis.

The added value of CMR compared to the standard techniques used for assessment of patients with pericardial diseases has substantially increased in recent years. Strong points in favour of CMR are the integration of anatomic and functional information within a single examination, the ability for tissue characterization and to determine the presence and degree of inflammation and activity of disease, and the

value of CMR to accurately assess the rest of the heart, in particular the myocardium, helpful in the differential diagnosis, which currently often remains a diagnostic challenge.

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Effect of Self-Management and Community Based Wellness Programme for Elder Women Suffering from Arthritis

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INTRODUCTION

Population Ageing India: The ageing of population is on the increase world over in recent times.[1] According to the census 2001, the population of the elderly (age 60 years and above) in India was 75.9 million, i.e. 7.4% of total population. It is projected to be 113 million, i.e. 8.9% of total population by the year 2016.[2]

Health Issues of Elder Women: Various studies in India proved that the population of female elderly persons especially in rural areas appears to be larger than their male because of their higher life expectancy.[3] The elderly are vulnerable to non-communicable diseases (NCDs) which are clearly a major morbidity in this age group. NCDs are responsible for 53% of deaths and 44% of disability in India.[4] Compared to men, the health status of women in India was found to be poor. Currently, elder women in India face a multitude of health problems like cough, joint pains, blood pressure, heart disease, diabetes and cataract/ loss of vision[5].

About Joint Pain in Elder Women: More than half of the elderly (more number of women than men) reported various physical problems. The problem of joint pains is common for both men and women. According to various studies, the prevalence of joints pain in males is 59.5% and in females is 67.3% in India[5]. The most common painful conditions among older adults are musculoskeletal conditions such as osteoarthritis, low back pain, and previous fracture sites.

Exercises play a major role in an individual's overall health; psychological and physical health status. Various studies proved that self-management programs aim to enhance the ability of patients to successfully self-manage their pain, using a variety of techniques. Self-management may be the most important aspect of arthritis management because it is directed by the person to improve his health and well-being.

Self-Management and Community Based Wellness Programme: This programme is a multi-dimensional intervention, a combination of learning to self manage their health concern with community initiatives through group programmes and individual home visits that engages subjects with in a series of classes in which they are helped to develop critical knowledge, skills and motivation to move forward in their recovery and achieve their personal goals. Lack of exercises / physical activity plays a major role in an individual's overall health; psychological and physical health status. Non medical interventions like these can assist elders in coping with and adapting to illnesses as proven through various studies provide better functional outcomes and are more cost effective than conservative care, surgery or more invasive procedures.

Collaborative effort of Max Super Speciality Hospital, Saket, New Delhi and Local Senior Citizen organisation at Chattarpur Extension, New Delhi: The content of the programme was the result of focus groups of elders (mainly males of the local senior citizen organization) in which the participants discussed common health issues. As reported, elder women hardly participated in their forums and it shall be worthwhile to do this programme with elder women having joint pains / arthritis which was the commonest complains. The collaboration entailed utilising services of Community Physiotherapist who runs the Wellness Centre in the community to run the Self-Management and Community Based Wellness Programme. The Self-Management Programme consists of home visits by the Community Physiotherapist to educate participants on home exercise for prevention and improving joint pains and hypertension. The Community Wellness Programme consists of participation in workshop and group exercises, in the Wellness Clinic. Group exercises entailed 4-5 elder women exercising together. We chose an elder's home for this activity. This improved social interaction amongst participants. Interventions included: 1) Techniques to deal with problems such as fatigue, pain; 2) Appropriate exercise for maintaining and improving strength, flexibility, and endurance; 3) appropriate use of medications; 4) Communicating effectively with family, friends, and health professionals; 5) Nutrition; 6) Dynamic Relaxation Therapy. Each participant of the programme received a copy of a booklet in local language, Hindi consisting of exercises in pictorial format.

Health and Support Services for Community Dwelling Elders: Health and support services are vital to maintaining health and independence of elders in the community. Many of the concerns raised by older people, deal with the unavailability of sufficient good quality, appropriate and accessible care. Most of the elders get health benefits from state and central government health schemes. The government hospitals are situated 7 kms from Chattarpur Extension.

METHODOLOGY

Venue and Subject Recruitment: The venue chosen was Chattarpur Extension and Chattarpur Village in South Delhi where a local senior

citizen organization named Varishtha Nagrik Kendra Sansthan (VNKS) was adopted for this project. The elder women members and spouse of elder male members of VNKS aged 60 or more and having complaint of joint pain were screened. Mr. Vajpayee, Patron of the Varishtha Nagrik Kalyan Samiti (VNKS) provided us with a list of all the members of VNKS. None of the 250 members were females. Active male members of VNKS were explained regarding the project. The Community Physiotherapist visited houses of members and recruited their wives. The subjects were explained thoroughly about the study and its objectives. The elder women enthusiastically helped more women with similar problems in the locality participate in the project. A sample of 81 elder women eventually participated. Demographic and medical profile of participants was documented during the initial visit.

Home visits by Community Physiotherapist

Outcome Measures: The following outcome measures were taken at start of project and two weeks before end of project

- Brief Pain Inventory (BPI)
- WHOQOL (WHO quality of life)
- Project Feedback Form

Interventions: Strategies of Self Management Programme included

- Relaxation and breathing exercises
- Mobility exercises
- Aerobic exercise
- Joint protection techniques
- Practical changes at home for better and safe mobility
- Managing pain
- Care giver education
- Weekly follow ups
- Distribution of booklets

Strategies of Community Wellness Programme included

- Workshop on Dynamic Relaxation Therapy
- Small Group Exercise Sessions

Follow-up Visits: Follow up of recruited subjects were done once in every week. Some were able to perform all exercises very passionately but some were not clear about doing the exercise correctly.

Leaflets: Leaflets in local Hindi language were printed and distributed to subjects who included diagrammatic figures of simple exercises for specific joint pain of knee, neck and low back, ergonomics and relaxation techniques.

Community Wellness through workshop on Dynamic Relaxation Therapy: A unique workshop was organized on Dynamic Relaxation Therapy. During the session, participants focused on building skills to manage their health conditions through Dynamic Relaxation Therapy.

The Dynamic Relaxation Therapy is a process which focussed on muscle relaxation, smooth breathing pattern and better blood circulation, Improvement in sitting and standing postures (through seven simple alterations) were taught, followed by the rotational exercises of every joint.

Small Group Exercise Sessions: Small groups of elder women met for exercises in their homes. Preferably one home was chosen for houses on the same street. Exercises were supervised by the Community Physiotherapist.

Care-giver Education: During follow ups care-givers of elderly, like son, daughter, daughter in law, husband were counselled to motivate the subject to keep up with exercises and diet modifications. Most care-givers expected us to give free medicines for pain relief, and felt that exercises and diet modifications are not an answer to relief of pain or hypertension. Leaflets in local language helped to educate the care-givers on intervention of simple lifestyle changes that may lead to lesser burden of disease on elder women and therefore ease burden on the caregivers in day to day life.

RESULTS AND DISCUSSION

The present study included 81 elderly women with the mean age of 62 years belonging to low socio-economic status with an average annual income of Rs. 75000. 85% of subject's were uneducated. The data was analyzed on the basis of pre and post-intervention results. We looked for changes in areas of health status (disability, social / role limitations, pain and physical discomfort, energy / fatigue, psychological well-being/ distress, health distress, self-rated general health, knowledge seeking behavior) blood pressure and compliance to diet modifications.

Result of Intervention of Physical Exercises: In the second week of follow up 60% subjects were performing the exercises. During the

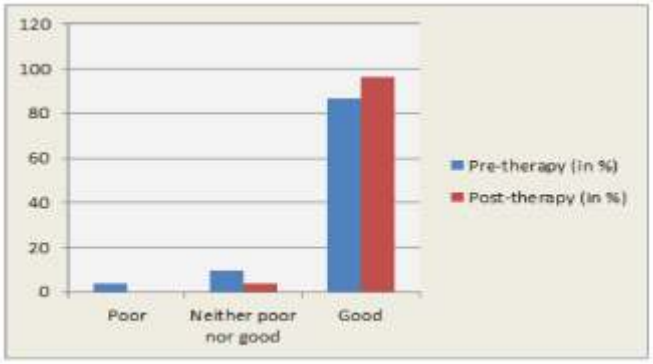
follow up, a few group therapy sessions was conducted with a small group of 4-5 subjects at a time. All the subjects doing the exercises had improvement in pains and hypertension. Some subjects reported inability to do exercises due to "obesity", "unwillingness", "laziness", "high household workload" etc . Some of them had a laid back attitude as the questions that arose were '*why should we change our routine as we do enough work in the whole day* ' and that 'nothing will happen if we do all these exercises and moreover we have left with only 5 – 10 years to live'. And some said sternly, that we don't need it 'we have enough knowledge and hence not interested' and that 'we won't be able to do it'. Some caregivers showed similar attitude as they were not interested in providing any treatment to their elders. Some of them behaved very rudely to us and even abused their mothers for showing interest in the project. Some women initially met us, but changed their mind in between the session and stopped us which were really surprised us. We found most elders asking for free medicines, but did not want to exercise or change their diet in any way. We reiterated side effects of long term taking of pain killers and explained them that exercises shall not only maintain their disease but shall also prevent further deterioration. In the last week (eighth week) of follow up 82% of participants were doing exercises regularly. Reassessment of the subjects on three outcome measures WHO Quality of Life, Brief Pain Inventory, and Blood Pressure was done in the first week of November.

The results showed improvement in the quality of life, pain and blood pressure of the subjects. (Details of results in Tables and Graphs 1-3 is as given below). Changes was found in the pre and post-therapy results of WHO quality of life which showed a improvement in various aspects of subject's life (e.g. quality of life, health, pain, requirement of treatment, energy, concentration, sleep, ability to do work etc). Similarly improvement was found in Brief Pain Inventory' pre and post-intervention results with a reduction in pain and its interference in day to day life (e.g. general activities, mood, walking abilities, sleep and enjoyment of life etc). The post-intervention results showed reduction of blood pressure in 80% of subjects. Overall 82% women exercised well or have increased their exercise and hence decreased sedentary physical activity pattern. Some women reported that they have started taking physical activity seriously and one of them reported that she had lost weight due to regular exercises.

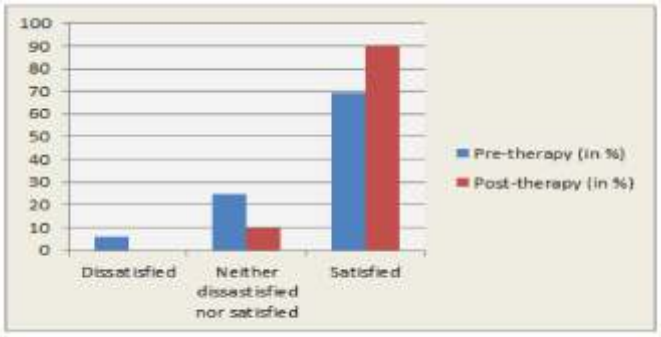
WHO QUALITY OF LIFE (QOL)

Tables and Graphs 1: Pre and Post Intervention Results changes in Quality of Life

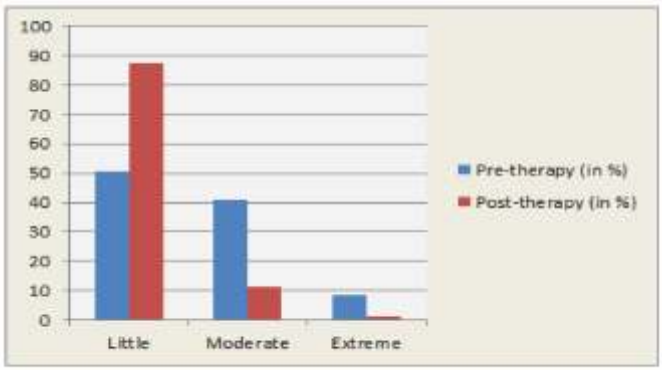
Quality of Life	Pre-therapy (%)	3.70	9.87	86.41
	Pre-therapy (%)	0.00	3.70	96.29
		Dissatisfied	Neither dissatisfied nor Satisfied	Satisfied
Health	Pre-therapy (%)	6.17	24.69	69.13
	Pre-therapy (%)	0.00	9.87	90.12
		Little	Moderate	Extreme
Pain and Requirement of Treatment	Pre-therapy (%)	50.61	40.74	8.64
	Pre-therapy (%)	87.65	11.11	1.23
		Little	Moderate	Extreme
Energy and Concentration	Pre-therapy (%)	9.87	39.50	50.61
	Pre-therapy (%)	1.23	24.69	74.07
		Dissatisfied	Neither dissatisfied nor Satisfied	Satisfied
Sleep	Pre-therapy (%)	12.34	27.16	60.49
	Pre-therapy (%)	1.23	30.86	67.90
		Dissatisfied	Neither dissatisfied nor Satisfied	Satisfied
Ability to do work	Pre-therapy (%)	12.34	41.97	45.67
	Pre-therapy (%)	2.46	25.92	71.60



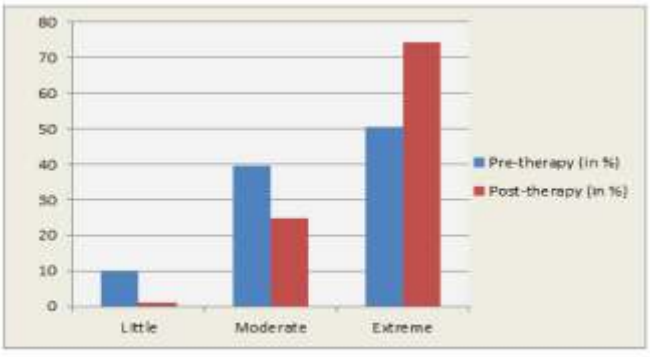
Quality of Life



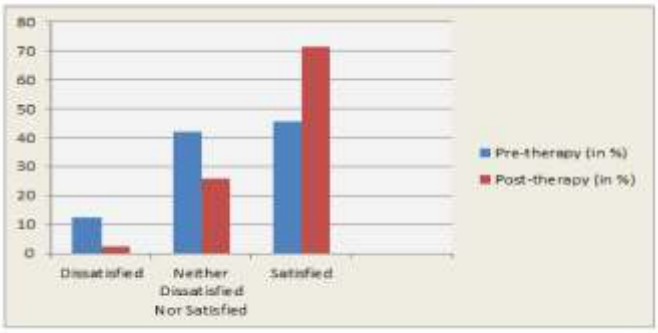
Health



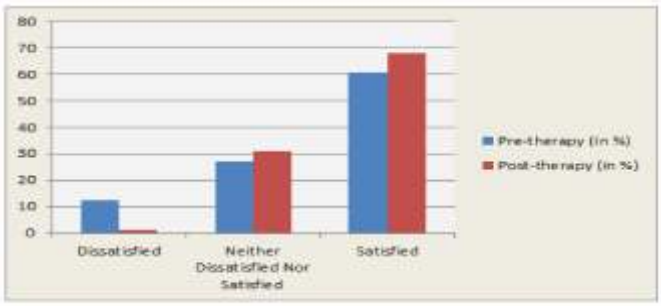
Pain and Treatment



Energetic and Concentration



Ability to do work

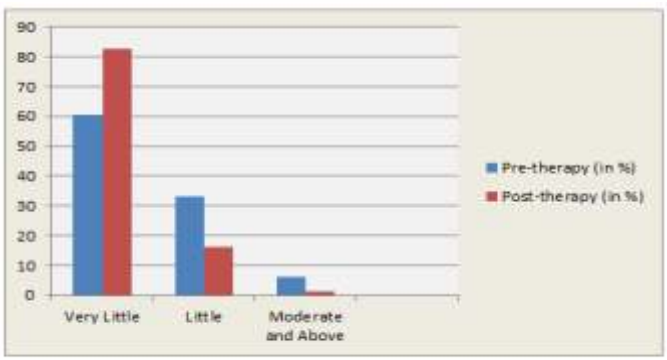


Sleep

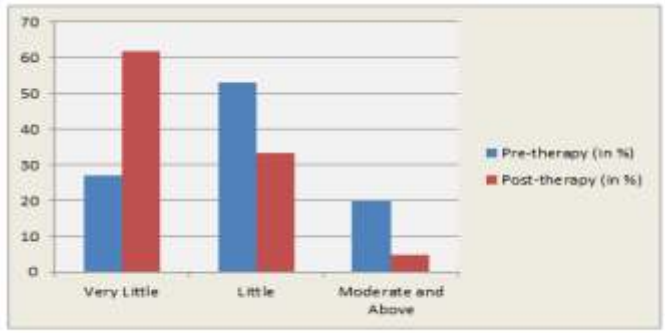
BRIEF PAIN INVENTORY (BPI)

Tables and Graphs 2: Pre and Post intervention results of changes in Pain and Inference in other areas of Life

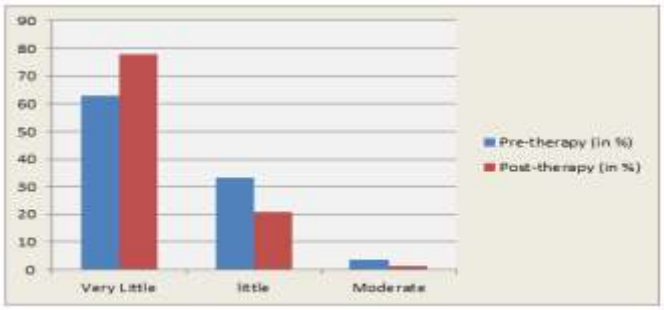
		Very Little	Little	Moderate
Pain	Pre–therapy (%)	8.64	32.09	59.25
	Pre–therapy (%)	12.34	64.19	23.45
Interference in general activities	Pre–therapy (%)	66.66	25.92	7.40
	Pre–therapy (%)	83.95	14.81	1.23
Interference in mood	Pre–therapy (%)	60.49	33.33	6.17
	Pre–therapy (%)	82.71	16.04	1.23
Interference in walking abilities	Pre–therapy (%)	27.16	53.08	4.93
	Pre–therapy (%)	61.72	33.33	3.70
Interference in enjoyment of life	Pre–therapy (%)	62.96	33.33	3.70
	Pre–therapy (%)	77.77	20.98	1.23
		Average	Moderate	Extreme
Sleep	Pre–therapy (%)	67.90	13.58	18.51
	Pre–therapy (%)	79.01	17.28	3.70



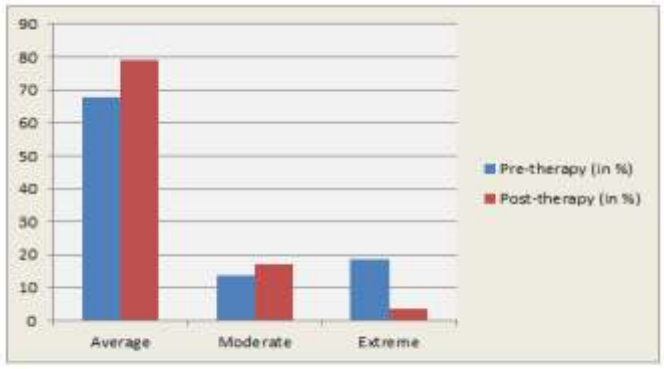
Interference in mood



Interference in walking ability



Interference in enjoyment of life



Interference in sleep

FEEDBACK ON SELF MANAGEMENT AND COMMUNITY WELLNESS PROGRAMMES

The project ended with filling up of a feedback form from participants. 95% of the participants strongly agreed about the well laid out objectives, proper time and place, good presentation and demonstration of the exercises during the project, books and hand-outs quality. But the rest 5% were simply agreed. Community Wellness Programmes which included workshops and small group exercises encouraged participation of subjects having similar problems. Mutual support and success build the participants' confidence in their ability to manage their health and maintain active and fulfilling lives. The experience documented by the Community Physiotherapist gives details of home visits to elder women. Within the end of eight week repeated weekly follow ups helped 82% of participants to perform exercises. Except for few, most of the caregivers were happy with care taken by the Community Physiotherapist. There was definitely better participation of exercises after Workshops and Small Group Therapy sessions which show social interaction and sharing of problems which helped participants take more interest in continuation of exercises.

CONCLUSION

Health and social services delivered within a city by local people in local establishments, and community-based support and voluntary groups may play an important role in delivering support and care to elderly. The model of The Self-Management and Community Wellness Program will not conflict with existing programs or treatment as it is designed to enhance regular treatment and disease-specific education given by

clinicians / family physicians in healthcare organization. It may form a cost effective way to introduce prevention of co-morbidities in elders. This model may also help integrate various services of healthcare in a city. The programme was especially helpful for women as it gave them the skills to coordinate their daily activities (participate in home tasks) and do exercises which can take care of their health, which can help keep active in their lives. Small groups improved comradeship amongst participants. Small group discussion regarding their health issue improved confidence about self managing health problems. A treatment for such co-morbidities which is based in the hospital, depend on constant motivation and close rapport with subjects. Relation between a physiotherapist and subject maybe more "friendly", as the community physiotherapist is close to subjects and his / her family members.

Such Community health services may help elders to keep healthy and active. Such programs also make people aware about their health conditions and also help them to cope up from their condition.

This unique project was done by Max Super Specialty Hospital, Saket, New Delhi in the community. Self Management and Community Wellness Programmes can be a good healthcare model which involves community elders to participate in their health issues.

FEEDBACK ON SELF MANAGEMENT AND COMMUNITY WELLNESS PROGRAMMES

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Palpable Abdominal Lump

Dr. Richa Bansal[a], Dr. Gurpreet Makkar[b]

[a] *Consultant - Radiologist*
[b] *Sr. Consultant - Radiologist*
Max Super Speciality Hospital, Saket

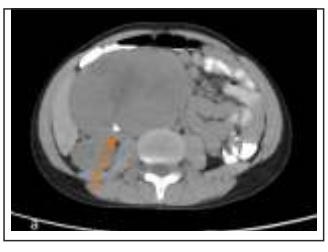
CASE

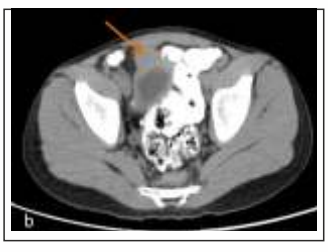
10 years old male presented with palpable abdominal lump.

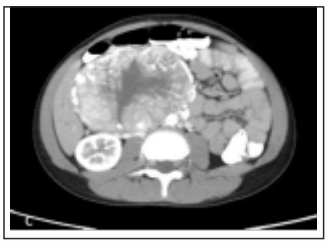
CT SCAN FINDINGS

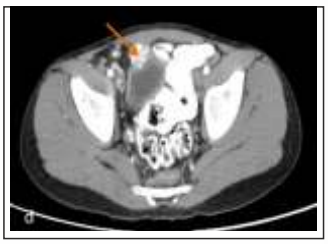
Plain (a, b) and Contrast (c, d) CT Scan of the abdomen show a highly vascular heterogenously enhancing retroperitoneal mass with focal calcification. Similar small lesion seen anterior to the urinary bladder.

- Large well defined heterogenous intensely enhancing mass lesion anterior to right kidney compressing the IVC and right renal vessels with loss of fat planes with right common iliac artery and duodenum with similar enhancing lesion along anterior wall of urinary bladder. The right adrenal was seen separately.
- Findings suggest possibility of neurogenic tumour (likely paraganglioma)









HISTOPATHOLOGY

- Sections show a growth composed of large round cells with centrally placed nuclei having dense chromatin and indistinct nucleoli, arranged in a nested pattern with presence of many thin walled blood vessels in between cell nests.
- (IHC) Report: The tumour cells show diffuse, strong expression of Chromogranin, NSE and are negative for Cd45.
- Opinion: Paraganglioma

PARAGANGLIOMAS

- The term "paraganglioma" applies to tumors arising from paraganglia regardless of location . The only exception is the paraganglioma of the adrenal medulla, which is universally known as pheochromocytoma.

- Paraganglia make up a dispersed neuroendocrine system near or in the autonomic nervous system, which has a roughly symmetric distribution with extension from the skull base down to the pelvic floor.
- Extraadrenal paragangliomas can occur in individuals at any age, although most arise in the fourth or fifth decades of life.
- Extraadrenal paragangliomas of the abdomen arise predominantly from paraganglia located in the retroperitoneum. Of the paraganglionic tissues adjacent to the abdominal aorta, the most prominent collection is seen near the origin of the inferior mesenteric artery, which is known as the organs of Zuckerkandl.
- On CECT scans, these tumours appear as para-aortic soft-tissue masses with either homogeneous enhancement or central areas of low attenuation .Smaller tumours are more likely to be homogeneous in attenuation and sharply marginated as compared with larger ones.
- Punctate calcification or focal areas of high attenuation caused by acute hemorrhage may be seen in some tumours.
- These tumours are usually hypointense or isointense compared with the liver parenchyma on T1-weighted MRI and are markedly hyperintense on T2-weighted MR images.
- MIBG, either labeled with 123I or 131I, is a norepinephrine analogue that follows the same pathways as norepinephrine and is therefore avidly taken up in many pheochromocytomas and extra-adrenal paragangliomas.

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http://www.ajronline.org/doi/full/10.2214/AJR.05.0370



Myasthenia Gravis after Cardiac Surgery

Dr. Kewal Krishan[a], Dr. Mukesh Kumar[b], Dr. Rajneesh Malhotra[a]

[a] *Department of Cardiovascular Surgery,*
[b] *Department of Neurology*
Max Super Speciality Hospital, Saket

Autoimmune Myasthenia Gravis (MG) is a heterogenous disorder. In young women, the thymus gland is often hyperplastic, and the patients respond well to thymectomy. However, in the increasing number of patients over the age of 40 years, predominantly men, thymic hyperplasia is uncommon, and there are no clear aetiologicalclues. Myasthenia gravis is the most common disorder of neuromuscular transmission and is a disorder that is generally autoimmune, which is caused by an auto-antibody to the nicotinic acetylcholine receptor. Here, we present 2 consecutive cases underwent cardiac surgery. Severe myasthenic symptoms began 4-6 days after the operation and emergent mechanical ventilation was needed because of myasthenic crises.

We had 2 consecutive patients who underwent bypass surgery and required multiple intubations due to respiratory paralysis. Neurologic examination showed ptosis and gaze palsy with facial muscle weakness and reduced gag reflex. They showed typical decremental responses to repetitive stimulation on electromyography (EMG) and increased jitter in single fiber electromyography. The Tensilon test was positive, and the serum anti-acetylcholine receptor antibodies were negative. The first patient was70 years gentleman underwent CABG successfully. He had H/o bilateral foot drop due to lumbar canal stenosis for >10 years. Family members denied any significant past history prior to the surgery. He was extubated as per protocols but reintubated. Post intubation, alertness improves so again he was extubated. He was 4 time intubated in post op period in 6 days. Neurologist opinion was sought to rule out any neurological deficit. Similar findings were found in an another patient after few weeks i.e. Recurrent intubation, weaning failure, poor gag reflex, proximal quadriparesis and neck flexor weakness. So both underwent electrophysiological, biochemical and radiological evaluation. Nerve conduction study, CT head and chest x-ray were normal. Their neostigmine test was positive. Both were advised for intravenous immunoglobulin but it was given to second patientonly. Pyrdostigmine continued in both patient. Both were extubated after myasthenia treatment for few days, their weakness was improved and shifted to room. They were discharged on wysolone and azathioprine.

In conclusion, when symptoms such as double vision, eyelid drooping, and difficulty in swallowing occur in the post operative period after cardiac surgery, it should be realized that a patient may have developed MG and emergent diagnosis and treatment should be performed. The presentation of myasthenic symptoms in the patients shortly after surgery may be purely coincidental, but because the delay is short, it is believed that the cardiac surgery may precipitate the condition or exacerbate the existing subclinical disease. Early diagnosis and treatment is crucial for recovery and outcome.

Table 1. Modified Osserman Classification for Myasthenia Gravis

Class I	Patients with ocular involvement alone
Class II	Mild muscular weakness, not incapcitating
Class III	Moderate muscular weakness, not incapaciaing, including oropharyngcal and respiratory muscle weakness
Class IV	Incapacitating weakness of any muscle system, including oropharyngcal and respiratory muscle weakness
Class V	Life threatening respiratory insuffficienct requiring ventilatory assistance (crisis)

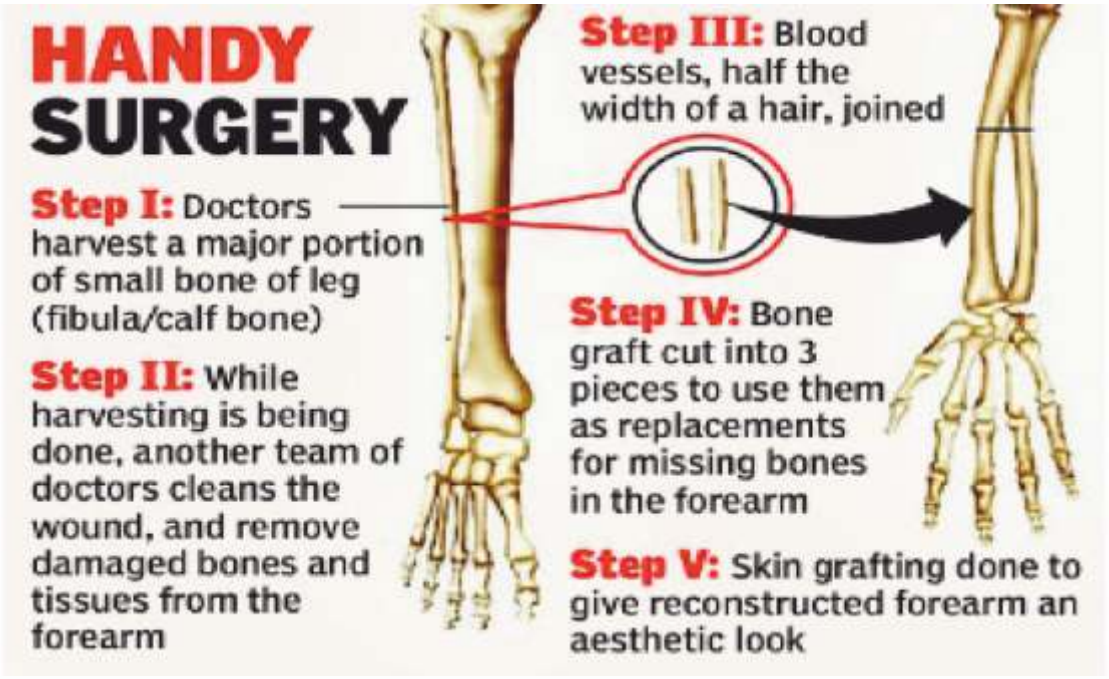
Table 2. Time of clinical effects of different drugs in Myasthenia Gravis.

Treatment	Time to Clinical Effect
Pyridostigmine	10-15 minutes
Plasmapheresis	1-14 days
IVIg	1-4 weeks
Prednisone	2-8 weeks
Mycophenolate mofetil	2-6 months
Cyclosporine	2-6 months
Azathioprine	3-18 months

Nigerian gets Hand Back after 8 Hours Surgery

Dr. Sunil Choudhary

Director – Max Institute of Aesthetic & Reconstructive Surgery
Max Healthcare



Nigerian gets hand back after 8-hour surgery

DurgeshNandan.Jha
@timesgroup.com

New Delhi: Two months ago, when doctors in his hometown told Lawrence Odega he will have to choose between life and limb, the Nigerian national was shocked. The 51-year-old's left hand was mutilated in a road accident and it had become gangrenous due to infection.

He didn't lose hope and rushed to India on the suggestion of a local doctor with the hope of surviving with a functional hand. It was a joyous occasion for Odega when plastic surgeons at a private hospital in the city replaced the diseased tissues and bones in the forearm with grafts taken from another limb.

RELIEVED: Lawrence Odega

transplantation is a procedure wherein the patient's own tissues or bone is transplanted from one part of the body to another. There is no fear of rejection, but the difficult lies in carving out the bone graft from the leg into two separate segments without damaging its blood supply and then reconnecting it to the blood vessels of the elbow," he said. The doctor added that they used a long bridge of vein grafts from the leg as is used in heart bypass surgery to connect the blood.

"It was one of the most challenging surgeries. It involved reconstructing the radius and ulna—two large bones of the forearm—from the small bone of the leg called fibula. We conducted the whole procedure in about eight hours," said Dr Sunil Choudhary, director of aesthetic and reconstructive plastic surgery at Max hospital, Saket. "The function of the small bone of the leg is only supportive. It does not affect the patient's ability to walk," he added.

According to Dr Choudhary, microsurgery technique was used to transplant the bone graft and tissues. "Auto-

The surgery was conducted about a month ago and Odega said he is already able to lift light objects, for example a glass of water. "I am confident of being able to drive again in the coming days," he said.

Reconstructive microsurgery is being used extensively these days to treat crushed and mutilated limbs and to correct birth deformities such as webbed fingers and extra digits.

WELCOME TO THE TEAM

Dr. Pradeep Muley
Sr. Consultant - Interventional Radiology
Max Super Speciality Hospital, Saket

EDUCATION

- MD (Radiodiagnosis), M.G.M Medical College, Devi Ahilya Vishwavidyalaya, Indore
- Fellowship in Interventional Radiology, Singapore General Hospital, Singapore

EXPERIENCE

- Consultant Interventional Radiologist in the Dept. of Body & Neuro Interventional Radiology from Fortis Hospital, Vasant Kunj, New Delhi since January 2009
- Associate Consultant in the Dept. of Vascular & Interventional Radiology from Kerala Institute of Medical Sciences, Trivandrum – 2002 to 2004

ACCOMPLISHMENTS / AWARDS

- He has performed more than 10,000 diagnostic & interventional procedures
- He has performed maximum numbers of uterine Fibroid embolization in country
- He has delivered numerous lectures & conducted workshops on various topics

AREAS OF INTEREST

- Body (General) Interventional Radiology
- Neuro Interventional Radiology
- Neuro Radiology

MEMBERSHIPS

- Fellow Member of Interventional Radiology
- Fellow Member of Neuro Interventional Radiology

LOCATION AND DURATION OF OPD

Max Super Speciality Hospital, Saket

- Monday - Saturday: 9.00 am - 6.00 pm

Congratulations

'Devi' Dr. Roopa Salwan

The Sunday Standard, which is part of The New Indian Express Group, had hosted **'Devi',** a defining event to recognize & honour 20 exceptional Indian women who display dynamism & innovation in their work on the principle of **'Favour None, Fear None'.**

Dr. Roopa Salwan (Director, Myocardial Infarction Programme of Max Healthcare, Saket) was one of the personalities thus honoured. We congratulate her on being chosen as one of the 'DEVIs' at this event held at **ITC Maurya,** New Delhi on **December 17, 2014.**

Giving out the awards, Rajasthan's first woman chief minister **Vasundhara Raje,** a super-Devi herself, said -

"Every Woman has a Devi within Her... "

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