SREE CHITRA TIRUNAL INSTITUTE FOR MEDICAL SCIENCES AND TECHNOLOGY

Thiruvananthapuram – 695011, India

WORK RECORD

Name : Dr. SIVAPRASAD V

Course : MCh

Discipline : CARDIO VASCULAR AND THORACIC SURGERY

Year of Study : Jan 2011 – Dec 2013

CERTIFICATE

I hereby certify that I have performed/ assisted all the procedures listed in the work record.

Place: Thiruvananthapuram

Date: 01/10/2013

Signature:

Dr.Sivaprasad V

Forwarded: The above candidate has satisfactorily carried out the minimum required procedures.

Seal

Prof. Jayakumar K, Mch

Head of Dept. of CVTS

SCTIMST, Thiruvananthapuram

PROCEDURE ASSISTED

CARDIAC- ADULT

1	CABG	188
2	CABG + AVR	5
3	CABG + LINEAR PLICATION	3
4	CABG + MV REPAIR	2
5	CABG + MVR	1
6	CABG + ASD	1
7	REDO CABG	1
8	OPCAB	6
9	ADULT ASD	4
10	MVR	30
11	MVR + TV REPAIR	8
12	MV REPAIR	4
13	AVR	36
14	DVR	13
15	MVR + RV ENDOCARDIECTOMY	1
16	MVR + PAVCD	1
17	AVR + MV REPAIR	4
18	REDO MVR	1
19	REDO AVR	1
20	VSR	1
21	SAM PROCEDURE	1
22	BENTALL OPERATION	6
23	SCAR	2
24	LA MYXOMA EXCISION	3
25	DOR PROCEDURE	1
26	MORROW'S OPERATION	2
27	ANEURYSMECTOMY	1

PROCEDURES ASSISSTED

CARDIAC – ADULT

28	THORACOTOMY ASD	1
29	ASD DEVICE RETRIEVAL	1

THORACIC AND VASCULAR

1	LOBECTOMY	1
2	LEFT CEA	1

CARDIAC- MINOR PROCEDURES

1	SECONDARY SUTURING	3
2	SINUS EXCISION	2
3	LEFT CIMINO	1
4	PMMC FLAP	1
5	RE-EXPLORATION	4
6	PACING LEAD IMPLANTATION	1
7	PERICARDIAL EFFUSION	1

CARDIAC – CONGENITAL

1	VSD CLOSURE	14
2	VSD + PDA	1
3	VSD + AVR	7
4	SV ASD CLOSURE	7
5	OS ASD CLOSURE	8
6	ASD + PDA	1
7	PDA	2
8	COA	3
9	TOF	27
10	TAPVC	10
11	PAVCD	7
12	CAVCD	1
13	ALCAPA TRANSLOCATION	3
14	BT SHUNT	2
15	BDG	7
16	CONE REPAIR	3
17	AP WINDOW REPAIR	1
18	ASO	3
19	MPA AUGMENATION	1
20	REV PROCEDURE +LPA PLASTY	1
21	PA BANDING	1
22	KAWASHIMA PROCEDURE	2
23	SCIMITAR SYNDROME	1
24	FONTAN PROCEDURE	3
25	MELBOURNE SHUNT	3

26	COMMON ATRIUM	2
27	ICR WITH HOMOGRAFT	3
28	SENNING'S PROCEDURE	1

MISCELLANEOUS

1	DELAYED STERNAL CLOSURE	4
2	STERNAL DEBRIDEMENT AND PECTORAL FLAP RECONSTRUCTION	1
3	HOMOGRAFT HARVEST	8
4	PPI IMPLANTATION	1
5	TRACHEOSTOMY	2

PROCEDURES PERFORMED

1	ASD CLOSURE	8
2	MINISTERNOTOMY + ASD CLOSURE	1

PROCEDURES PERFORMED

HOSP NO	DOS	DIAGNOSIS	PROCEDURE	ASSISTED BY
355643	23/05/2013	ACHD,OSASD,MILD MR,MOD PAH,SR	TPP CLOSURE OF ASD	DR VIVEK PILLAI
353633	08/05/2013	ACHD,OSASD,SR	TPP CLOSURE OF ASD	DR VIVEK PILLAI
341658	05/04/2013	ACHD,OSASD,MILD MR,MILD PAH,SR	TPP CLOSURE OF ASD	DR VIVEK PILLAI
312851	27/02/2013	ACHD,OSASD,MILD MR,SR	TPP CLOSURE OF ASD	DR SABARINATH MENON
352999	15/01/2013	ACHD,OSASD,SR,RBBB	TPP CLOSURE OF ASD	DR SABARINATH MENON
259330	07/01/2013	ACHD,OSASD,MILD MR,MOD PAH,SR	TPP CLOSURE OF ASD VIA MINISTERNOTOMY	DR SABARINATH MENON
344172	24/12/2012	ACHD,OSASD,,SR	TPP CLOSURE OF ASD	DR SABARINATH MENON
322446	27/11/2012	ACHD,OSASD,MILD MR,SR	TPP CLOSURE OF ASD	DR SABARINATH MENON
338961	13/07/2012	ACHD,OSASD,MILD MR,MOD PAH,SR	TPP CLOSURE OF ASD	DR VARGHESE T PANIKER

LIST OF CASES

PAPER PRESENTATION

59TH ANNUAL CONFERENCE OF IACTS

- ✓ **MIDTERM RESULTS OF MODIFIED BENTALL PRODEDURE WITH INTRAOPERATIVE CUSTOM MADE COMPOSITE GRAFT USING TTK CHITRA VALVE**

- ✓ **ABERRANCY OF SUBCLAVIAN ARTERY WITH OR WITHOUT CONGENITAL CARDIAC ANOMALY-**
  SURGICAL EXPERIENCE AT SREE CHITRA TIRUNAL INSTITUTE, INDIA.

- ✓ **A LEAF from Neurosurgery - RESECTION OF STERNAL TUMOUR AND MULTI TEAM RECONSTRUCTION WITH ''BONE SUBSTITUTE''- A NOVEL APPROACH**

INTERESTING CASES

1. BENTALL OPERATION
2. ALCAPA
3. DOR PROCEDURE
4. ASD DEVICE RETRIEVAL
5. CONE REPAIR
6. LA MYXOMA EXCISION
7. STERNAL TUMOUR
8. MINISTERNOTOMY ASD CLOSURE
9. RUPTURED TYPE 5 TAAA
10. RESECTION AND REIMPLANTATION OF COILED CAROTID WITH STENOSIS

BENTALL PROCEDURE

Diagnosis: - ANNULOAORTIC ECTASIA,SEVERE AR, GOOD LV, SR, and MARFANS SYNDROME.

Procedure: - BENTALL OPERATION -AVR # 27 SJM + 28 MM ALBOGRAFT

History: - 28 year old male, known c/o Marfan's presented with angina on exertion since 4 months, and was associated with palpitation. No H/o syncope/TIA/CVA. No H/o CAD. Family history +, similar disease in maternal uncle and 2 cousin brothers. No H/o other co morbidities.

Physical Examination: -Marfanoid habitus+.PR- 76/ min. Regular. All peripheral pulses palpable. BP: 140/50 mmHg.arm span 0.75,no corneal/palatal defect

CVS – Apex beat in the 5th left ICS lateral to MCL. S2 loud. Early Diastolic murmur at Aortic area (3/6).

Blood investigations – Normal

CXR - CTR 0.48, LV apex, dilated ascending aorta. Left arch.

ECG - SR. HR 67/min. PR Interval - 0.28 sec. QRS axis + 50 deg. V1 R/S 3/9,V6 R/S 21/3.***Echo*** – LVID D/S 52/38, EF 55.5%. LA – 31, Ao at sinus 67.5 mm. Asc. Ao 62 mm. Aortic annulus 32 mm. No RWMA, good LV function. AR 3 +, MR 0, TR 2 +, RVSP 12 + RA mean.

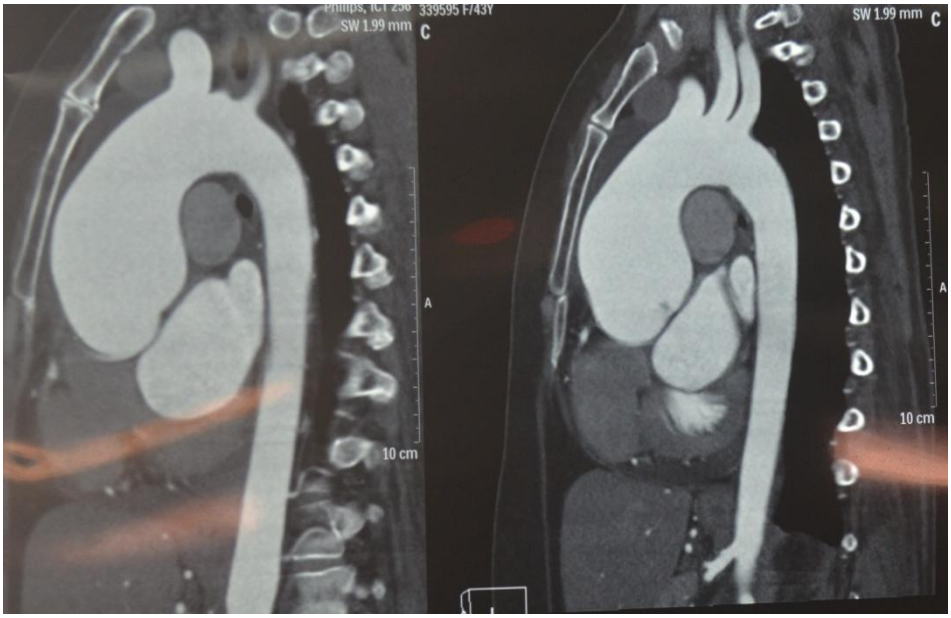
CT Angiogram - Aortic Root 55.5 mm. Asc. Ao. Proximal 50 x 6.1 mm. Asc.Aorta at MPA bifurcation 55 x 52, Aortic arch 2.7 mm. DTA at MPA bifurcation 23 mm. Fusiform aneurysmal dilatation of Aortic Root and ascend aorta.

Surgical findings: - Moderate cardiomegaly, Mild pericardial effusion. LV dilated, Good LV contractility. Aortic Valve – Leaflets deformed. Severe AR. Aortic annulus dilated ~ 30 mm. Aortic root dilated approximately 8 cm, fusiform dilatation up to mid ascending aorta, rest of ascending aorta and arch mildly dilated. No calcification. RCA origin was very small. 10 mm OSASD present, closed directly.

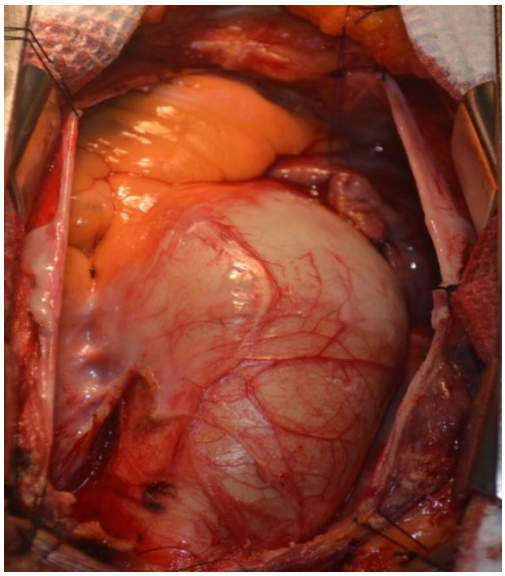
CPB time – 135 min, ACC time – 101 min.

Procedure :- Standard midline sternotomy. CPB with distal aortic and bicaval cannulation.aorta cross clamped. Aneurysm opened, antegrade direct ostial plegia and diastolic arrest. Ascending aorta transected, aneurysmal sac excised. Coronary buttons harvested. Aortic valve excised and sized. Composite valve - graft conduit made with 27 CHVP and 28 mm Albograft. Conduit placed and coronary buttons anastomosed. Distal anastomosis completed. Aortic clamp removed after deairing and came off CPB with good hemodynamics.wound closed in layers.

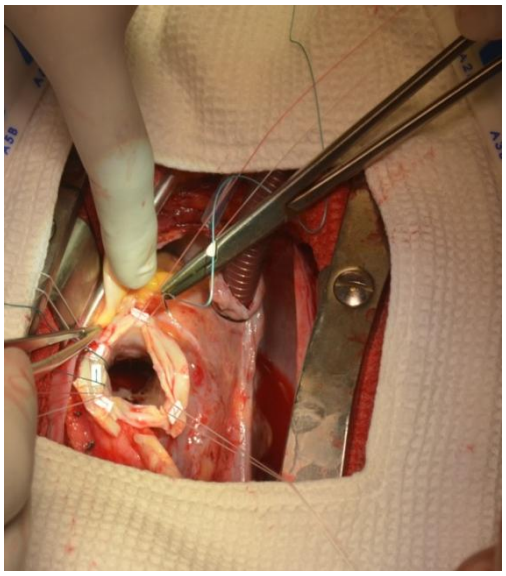
CT angio –aortic root aneurysm



Aortic aneurysm

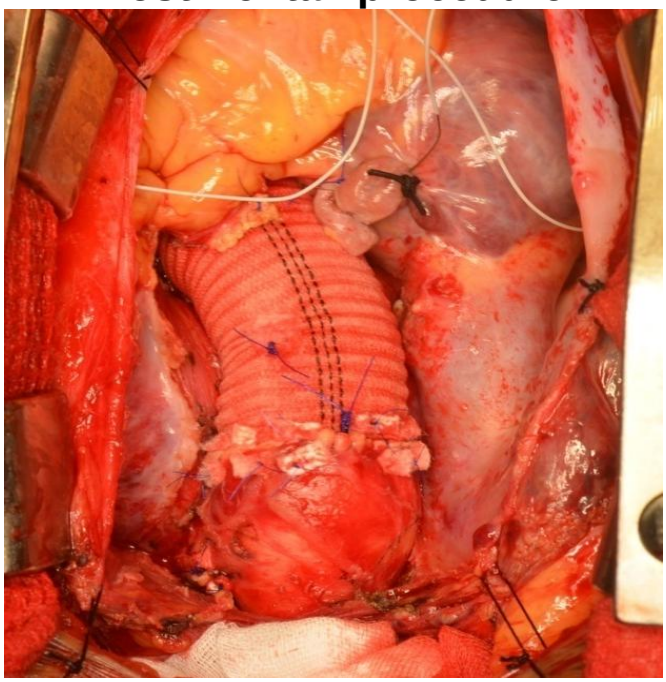


pledgetted valve sutures



On table prepared composite graft with Chitra Valve and Dacron graft

Post Bentall procedure



ALCAPA

Diagnosis: - ACHD, ALCAPA, MILD MR, SEVERE LV DYSFUNCTION, SR

Procedure: - LCA TRANS LOCATION+PFO CLOSURE

History: - 4 month old male child of non consanguineous marriage presented with h/o RTI at 1 month of age. Later developed feeding difficulty and sweating of forehead. Diagnosed as having CHD after evaluation. B. Wt. was 2.2 Kg, full term CS. Mother aged 22 years and Father aged 25 years at the time of child's birth. No H/o cyanosis,H/o failure symptoms +. Failure to thrive+.

Physical Examination: - Child hypoactive and emaciated. Conscious. No Pallor/ icterus/cyanosis/ clubbing/ LNE/edema. SPO2 91%. HR 132/mt. Regular. RR 74/mt. Interostal indrawing +.

CVS : Apex beat 6th LICS, just outside MCL. S1, S2, PSM + in the apex Gr. 2/6.

Chest : AEBE.no added sounds. **Abd :** Soft. Liver just palpable.

Blood Investigations – Normal

CXR - Bony and soft tissue shadow normal. CTR 62%. Consolidation (L) Lower lobe. LV apex. LAE +.***ECG*** - SR, HR 150/mt. PR 0.12 sec. QRS + 70 deg. R/S V1 17/20, V6 15/9, ST elevation V4 - V6. T inversion V4 - V6

ECHO - LV 31/28, IVS 5.3/5.4, PW 5.7/6.2, RVID 8, EF 16% Sh.Fr. 10%. LA/Ao 16/12, SS, LC, LA, LV dilated Venous drainage normal. IAS aneurysm + L -> R flow. AV - VA concordance. Papillary muscles are echo dense. LCA dilated 3 mm PV - 1.1 m/s. global RWMA. Peak PR 20 mm Hg.

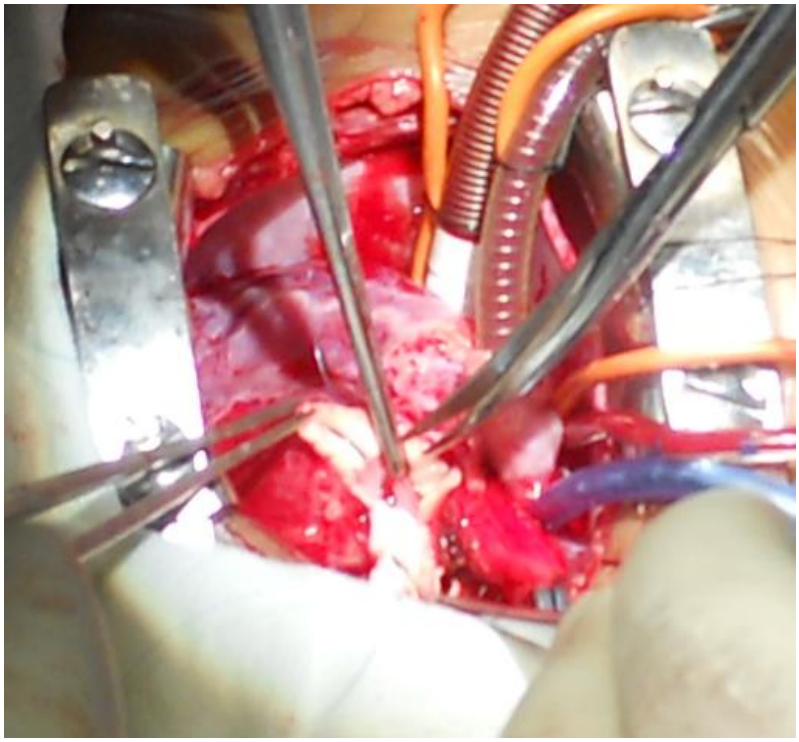
MR 2 + AR 1 +. ALCAPA from (L) Pulmonary sinus 8 mm away from Lt. coronary sinus.

Surgical Findings*: -* SS LC, Normal systemic and pulmonary venous return. Side by side great arteries.Cardiomegaly+. LV dilated. Severe LV hypokinesia. LCA arising from the right posterior sinus from PA. Very short LMCA. PA dilated . Collaterals present in the LCA territory. PFO +

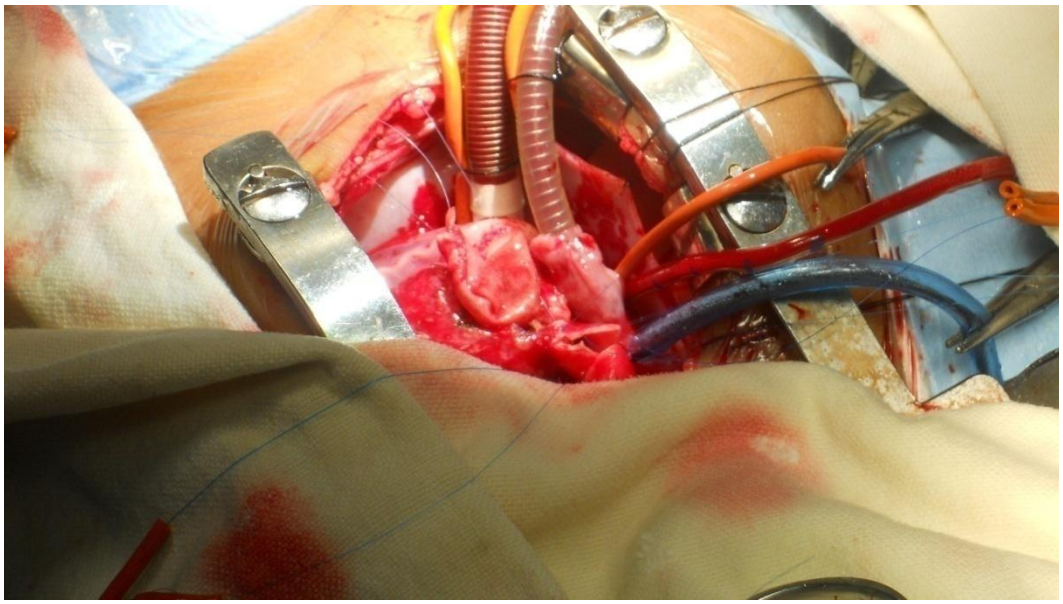
Aorta – RA cannulation. CPB time-160 min, ACC-72 min .

Procedure :- Median sternotomy. Aorta-RAA canulated , CPB instituted after snugging both RPA and LPA. LA vent. Antegrade blood cardioplegia via aortic root and PA. Immediate diastolic arrest. PA transected, coronory button harvested. Proximal LCA mobilised. Neo PA constructed with Tanned pericardial patch. Oblique aortotomy made anteriorly and coronary button anastomosed to aorta with 7.0 prolene. Aortotomy closed. PFO closed. Heart De-aired and clamp released. LCA filling well. PA reconstruction completed. Came off CBP with adequate filling pressures. Wound closed in layers.

Harvesting the coronary button



Anastomosis of LCA to Aorta



DOR PROCEDURE

DIAGNOSIS:- CAD, TVD, H/O AWMI, LV APICAL ANEURYSM, SEV LV DYSFUNCTION, DM, HTN, DLP, SR.

PROCEDURE:- DOR PROCEDURE + CABG X 5GRAFTS, LIMA-LAD, RSVG- MAJOR OM, D1, RPDA, RPLB

HISTORY:- 64 year old male presented with h/o DOE- III, started on FC-II progressed to FC- III. No h/o cardiac failure. Risk factor of CAD: DM+, HTN+, DLP-, ex-smoker, Family history+. Past history of ACS in 2005, h/o PPI implant in Feb 2013 for sudden onset bradycardia diagonosed as sick sinus syndrome.

PHYSICAL EXAMINATION:- Conscious, oriented. No pallor/ icterus/ pedal edema. HR: 84/min. BP: 120/70 mm Hg.

CVS- apex beat at (L) 5^{th} ICS, S1 and S2 +. RS- AEBE, clear. P/A- soft, NAD. CNS- NAD.Allen's test –ve, Carotid bruit –ve. PVOD –ve. Varicose vein –ve.

INVESTIGATIONS:-

Blood inxestgation WNL

CXR: CTR 0.60, increased BV markings, PPI in place with leads.

ECG: pacing rhythm regular.

ECHO: LV- 56/46, EF- 34%, SF- 16.5% LA/Ao- 32/31, RWMA- mid & distal AW entire AS, mid & basal IW, Sev hypokinetic with LV apical aneurysm with organized thrombus in LV apex,Sev LV dysfunction.

CAG: LMCA normal, LAD prox- 50-60%, distal total, Diagonal D1 & D2 mild ostial disease, LCX mild 70% distal diffusely diseased, RCA chronic total occlusion proximally.

SURGICAL FINDINGS:-

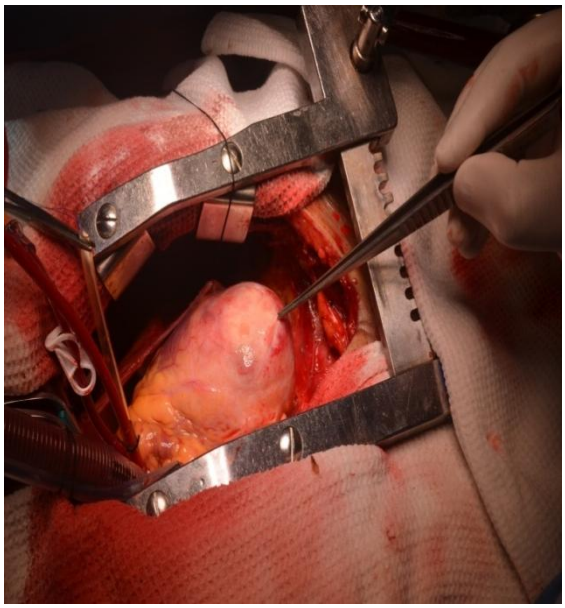
Sternum normal. Thymus+, innominate vein+. Pericardium normal. Aorta normal, 5x5cm. True aneurysm over the LV apex with organised calcified clot. TEE showed Moderate to severe LV dysfunction. LVEF- 20%, CO- 2.3L/min, AL wall severely hypokinetic. Mod MR. No other scars over the LV.

CPB- 190min, ACC- 108mins.

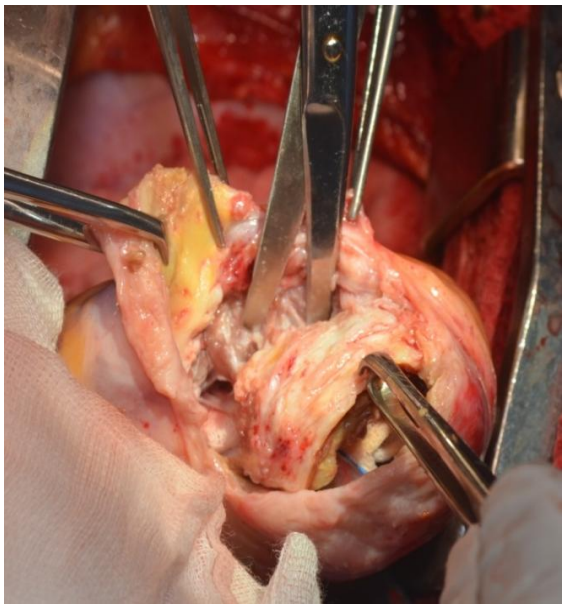
PROCEDURE:-

Median sternotomy. Simultaneously LIMA and RSVG was harvested. Aorto-RA cannulation and went on CPB. Aorta cross clamped. Antegrade tepid blood cardioplegia given. Heart arrested in diastole.distal grafts to MAJOR OM, D1, RPDA, RPLB done.Soft clamp applied over the grafts. LV aneurysm opened. Apical clot removed. Fontain suture taken at the margin of dead and viable endocardium towards the healthy endocardial side. Dacron patch fashioned according to the size of the defect created. dacron patch sutured at the margin including the fontain suture. Aneurysmal wall closed over the patch.ventriculotomy incision closed with felt. LIMA-LAD anastomosis done with 7-0 prolene. Aortic cross clamp removed. Proximal anastomosis of RSVG-Aorta done with 6-0 prolene. Grafts de-aired. Clamps over the grafts removed. Came off bypass with stable hemodynamics. Wound closed in layers.

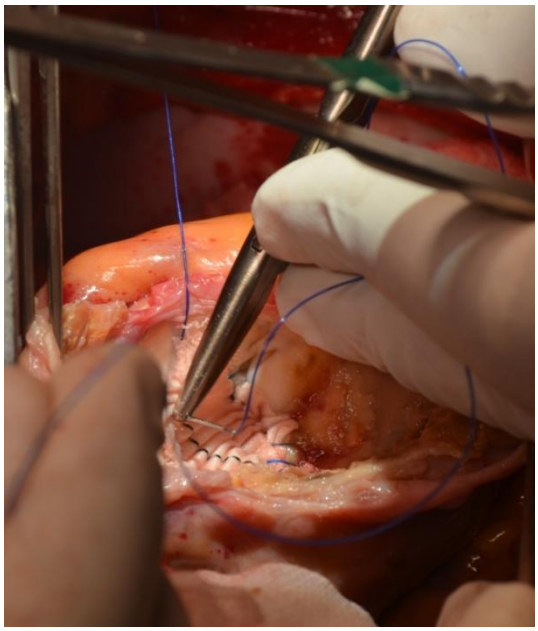
LV apical aneurysm



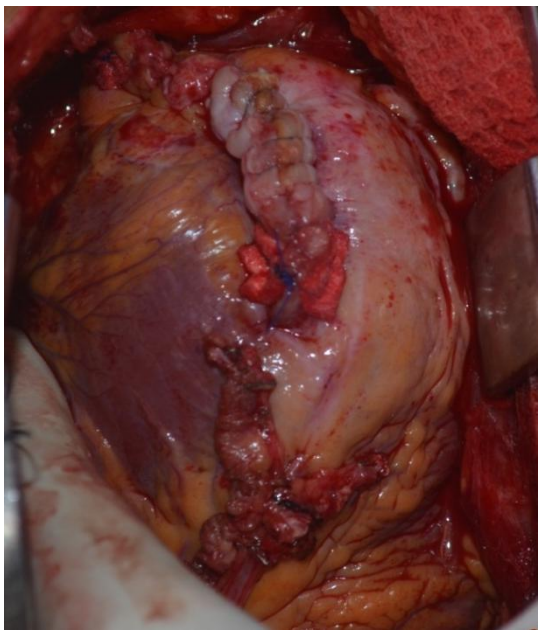
Calcified organised clot removed



Dacron patch closure



Ventriculotomy closed



CONE REPAIR FOR EBSTEINS ANOMALY

DIAGNOSIS:- ACHD, EBSTEIN'S ANOMALY, SEVERE TR, MILD RV DYSFUNCTION, SR, 1 DEGREE AV BLOCK, H/O ATRIAL FLUTTER.

PROCEDURE:- CONE REPAIR OF TRICUSPID VALVE WITH BPP AUGMENTATION OF SEPTAL LEAFLET + BDG+ FRESH PERICARDIAL PATCH CLOSURE OF OS ASD, PFO OPEN

HISTORY:- 32 year old lady , known cases of CHD since childlood. H/o bluish discoloration+ since childhood. H/o tiredness+ and h/o DOE FC-II- III+ x last 6 months. H/o palpitation+. No h/o syncope/ chest pain/ cough/ pedal edema. H/o CCF+, No h/o IE. H/o antenatal flutter managed with oral amiodarone.

PHYSICAL EXAMINATIONS:-

GC fair. Cyanosis and Clubbing present. HR- 76/min. Weight- 35kg. SPO2- 78%.

CVS- S1 S2+. S2 split +, wide and fixed. S2 loud. Normal precordium. 3/6 PSM + in Lower sterna border.

RS- AEBE. Clear. P/A- soft, BS +. No organomegaly or ascites. CNS- NAD.

INVESTIGATIONS:-

CXR- CTR- 85%, (N) BV markings, RAE +, RVH+.

ECG- SR- 73/min, 1st degree AV block, RAE +, RVH +.

ECHO- LVID- 24/19, RVID- 62, EF- 44%, LA/AO- 22/21, SS/LC, PV'S- LA. No PE, (L) arch. No COA. No LSVC, Ebstein's anomaly of TV. Anterior leaflet large and mobile, Large OS ASD+. Septal leaflet displaced. 27mm into RV, TR4+, RVSP 15+RA. Good biventricular function.

SURGICAL FINDINGS:-

SS, LC,NRGA, RA,RV severe dialatation, good RV contractility, Confluent PA, CS normal, atrialised RV, atrialised segment approximatedly 6cm.

Tricuspid valve- thin flail anterior leaflet arising from true annulus, delaminated septal leaflet and posterior leaflet adherent to RV wall with grossly dilated annulus. Multiple fenestration in tricuspid leaflets. Multiple ostium sec ASD. Mitral valve- normal, RV normal, no VSD.

CPB- 321min ACC- 230min

PROCEDURE:-

Median sternotomy. Patch hervested. RPA and SVC dissected and kept. Heparinised. Aortobicaval cannulation done, went on partial bypass. LV vent through RUPV placed. Aorta cross clamped.Antegrade blood CP and heart arrested in diastole. SVC and IVC snugged and went on total bypass.

RA opened parallel to AV groove. Redundant anterior leaflet separated adequately from annulus.seperated leaflet rotated clockwise and Free margin of septal leaflet sutured to mobilised anterior leaflet using 6-0 gorotex sutures. Also part of leaflet augmentation done with bovine pericardial patch.Tricuspid valve coaptation tested with saline, trivial TR + , pericardial patch closure of OS ASD done with 4-0 prolene. ASD patch fenestrated, redundant RA excised. Deairing started, cross clamp released. RA closed in single layer. SVC and IVC snugged and went on partial bypass. RPA and SVC mobilised for BDG. SVC divided close to RA with clamps and end suture ligated. RPA side clamped and incision placed. Proximal end of SVC anastomosed end to side with RPA with 6-0 prolene sutures. RA RV pacing wires placed, came off bypass in stages. Hemodynamics maintained. Wound closed in layers.

ASD DEVICE EMBOLISM

DIAGNOSIS:- ACHD, OS ASD, GD LV, SR, P/ FAILED DEVICE CLOSURE AND DEVICE EMBOLIZATION INTO ASC AORTA.

PROCEDURE:- DEVICE RETRIEVAL UNDER TCA + TANNED PERICARDIAL PATCH CLOSURE OF ASD

HISTORY:- 19 year old boy hailing from Kollam was diagnosed with OS ASD and, acute lymphoblastic leukemia at the age of 12 years and was cured with chemotherapy, no relapse of ALL. At that time he was incidentally detected to have OS ASD. No h/o DOE/ exertional palpitation/ Lt sided heart failure/ cyanosis. ASD Device Closure was attempted and device embolized to ascending aorta. Taken up for device retrieval and ASD closure as an emergency procedure.

PHYSICAL EXAMINATION:- Pulse- 76/min, BP- 110/70mmHg, RR- 12/min, No pallor/ icterus/ cyanosis/ edema. CVS: S1 S2(+), P2> A2, ESM (+) in pulmonary area

RS: AEBE, clear. P/A- soft, No HSM. CNS: NAD

INVESTIGATIONS:-

ECG- NSR, PR interval normal. Rsr in V1 and QRS axis

ECHO- 19X16 mm OS ASD, IVC rim- 11mm, MV rim- 13mm, RVSP 31+ RA, No PDA/VSD, Coronaries normal, Lt arch, no COA.

SURGICAL FINDINGS:-

SS, LC, NRGA, normal systemic and pulmonary venous drainage. RA & RV enlarged. Embolized ASD Closure device retrieved intact from the proximal aortic arch. 2x2 cm OS ASD with good margins. Normal tricuspid valve.

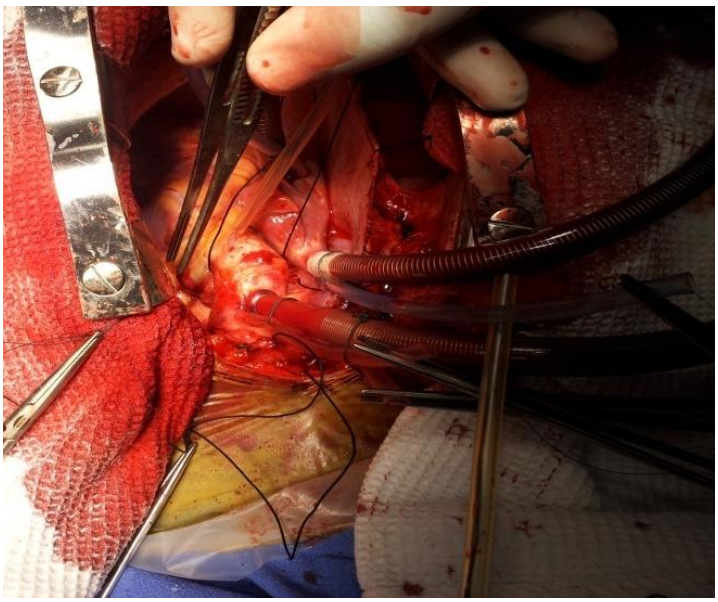
Coronary sinus normal. Rt femoral artery was repaired after removal of the sheath placed during the initial failed intervention.

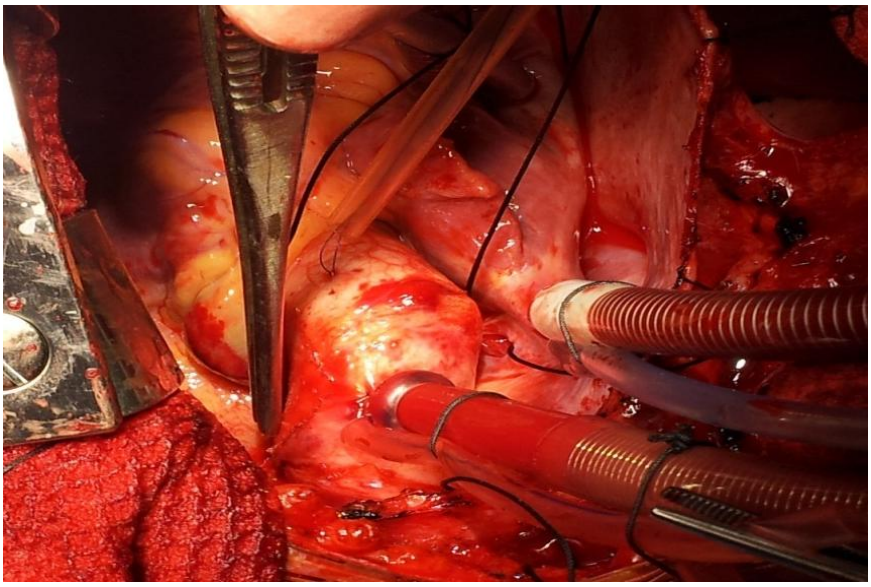
CPB- 61min ACC- 152min

PROCEDURE:-

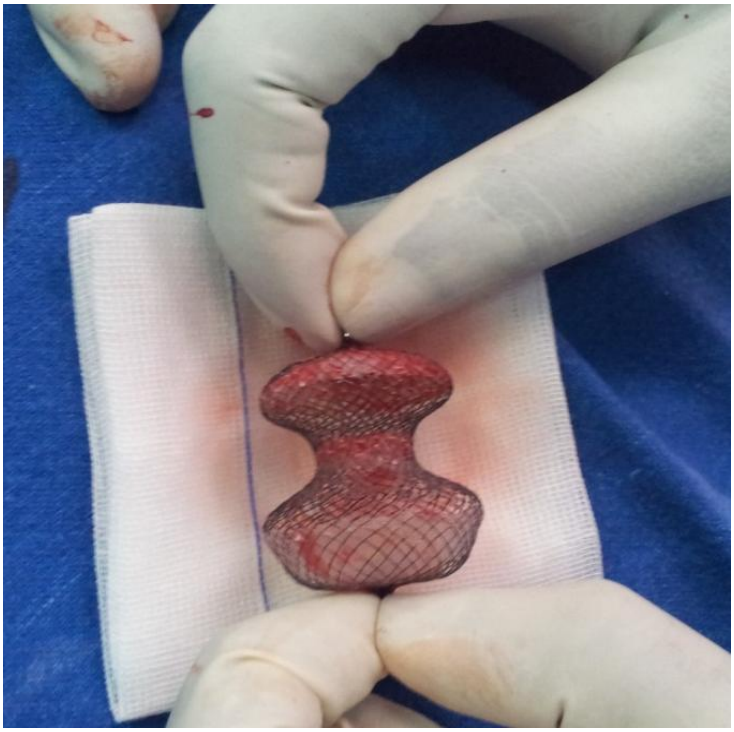
Standard median sternotomy. Pericardial patch hervested. Pericardial stays taken. Aortic purse strings taken and aorta cannulated. SVC and IVC cannulated. Cardioplegia purse string taken and cannulated. Aorta cross clamped and cardioplegia given. Heart arrested in diastole. Went on total circulatory arrest. Aorta opened inferiorly just distal to the aortic cannula. Embolized ASD closure device was seen in proximal aortic arch stuck in aortic wall.It was retrieved intact. Aorta closed in 2 layers and came off TCA and back on to CPB after deairing carefully. RA opened, OS ASD seen and closed with tanned pericardial patch. RA closed. De-airing done, cross clamp removed. Patient slowly weaned off bypass in sinus rhythm. Decannulated in stages. Wound closed in layer

Point on the aortic arch where device was pointing





Retrieved device



LA MYXOMA EXCISION

DIAGNOSIS:- LA MYXOMA, MOD MR, MOD PAH, MILD LVD, SR.

PROCEDURE:- LA MYXOMA EXCISION.

HISTORY:-

60 year old male, presented with h/o DOE since 3 months, started as FC –ll progressed to FC-III. H/o PND +. No h/o palpitation/ syncope/ AOE/ ACS. No h/o DM/ DLP/ claudication/ failure. No other surgical or medical illness. No such history in family.

PHYSICAL EXAMINATION:-

Conscious and co-operative. Pulse- 100/min. BP- 90/60 mmHg. RR- 14/min. No pallor/ icterus/ cyanosis/ pedal edema. CVS- diastolic thrill in Lt 5^{th} ICS in MCL. S1 S2 +. Murmur 3/6 MDM at mitral area.

RS- AEBE, Clear. CNS- No sensory motor deficit. P/A- Soft, No HSM.

INVESTIGATIONS:

CXR- CTR 0.5,prominent bronchopulmonary markings.

ECG- Sinus rhythm, Axis +120 degree.

ECHO- LV- 59/46.9, EF- 74%, LA/AO- 45/29, Large LA mass (Myxoma) attached to IAS at the level of FO measures 4.5x2.1cm, prolapsing into LV across MV during each cardiac cycle. MV Gradient 13/6 , MR 3+, Mod PAH, Mild LV dysfunction.

CAG- Normal right dominant.

SURGICAL FINDINGS:-

Pericardium normal, Aorta normal. LA mass myxoma 5x5x4cm attached with 3-4mm pedicle to post LA wall.

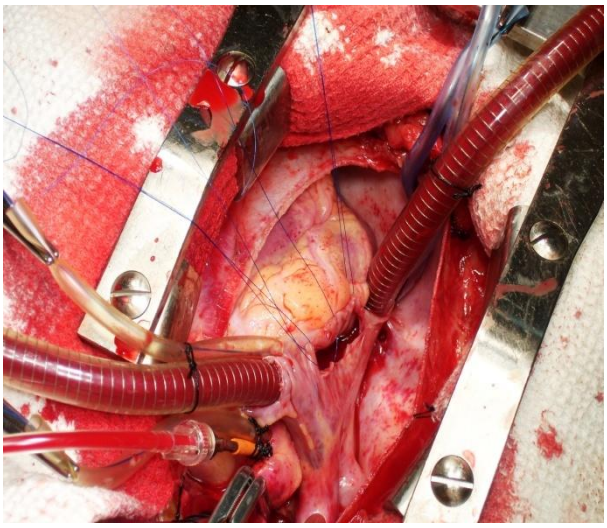
Pre op TEE- large LA mass, eccentric mod MR/ mild TR, mod PAH with mild LV dysfunction attached to IAS at the level of fossa ovalis prolapsing into LV across MV. Global LV hypokinesia.

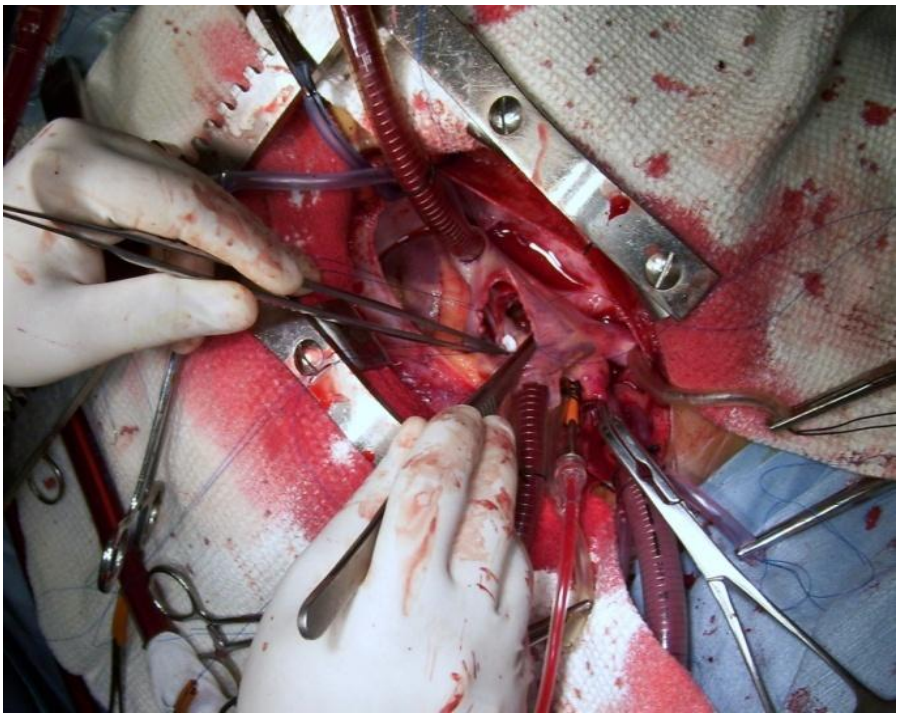
Post op TEE- No residual mass, Mild MR, No air.

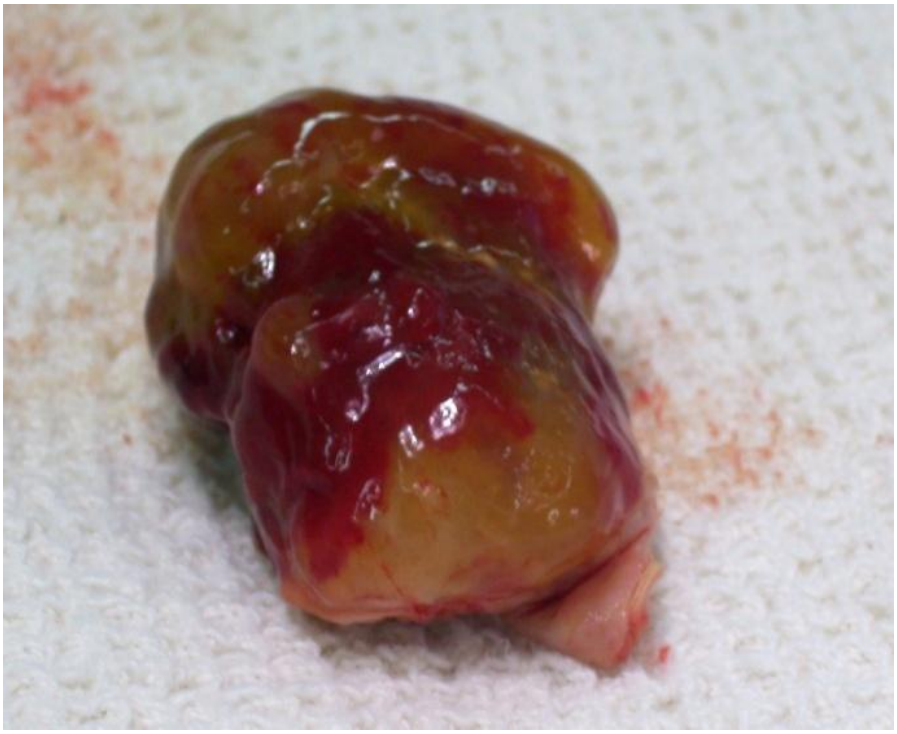
CPB- 99 min. ACC- 88min.

PROCEDURE:-

Primary median sternotomy. Median pericardiotomy incision, pericardial well created. Aortic, SVC and IVC purse strings taken, cannulated and went on aorto-bicaval bypass. Aorta cross clamped.cardioplegia given and heart arrested in diastole.went on total bypass. RA opened, LA approached by septectomy, excision of entire tumor mass 5x5x4cm done. Pedicle attachment to LA floor removed, shaving off part of LA wall.septal defect closed with pericardial patch.aortic clamps removed after deairing.RA closed. Came off bypass.post op TEE showed no residual ASD or LA mass or clot.sternum and Wound closed in layers.







STERNAL TUMOUR EXCISION AND RECONTRUCTION

Diagnosis –PRIMARY GIANT CELL TUMOUR STERNUM

PROCEDURE-EXCISION OF STERNAL TUMOUR WITH PMMA RECONSTRUCTION OF STERNUM

Patient presented with swelling in front of chest for 4 months of insidious onset.it was gradually progressing in size .no pain or tenderness.no loss of appetite or weight loss.no breathlessness or any mass compression effects

On examination Patient well built and nourished.vitals stable.on local examination 5x 5 cm mass was palpable in anterior part of sternum 3 cm below suprasternal notch,surface is smooth non tender,hard in consistency.no intrinsic mobility and fixed to sternum

Investigation

Blood investigation WNL.

Xray CTR 0.55,mild increase in thickness of sternum seen.no lytic features seen.

FNAC-smears reveals sheets of polygonal cells with vesicular nuclei and scanty cytoplasm.numerous giant cells present.

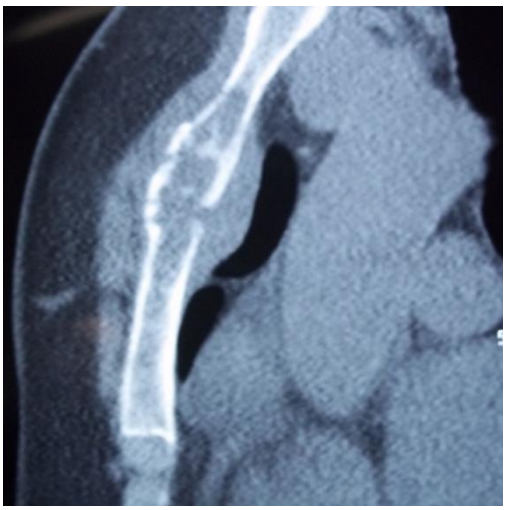
CT CHEST-well defined lobulated lesion seen arising from and involving most of sternal body. It showed soft tissue density with almost no enhancement or abnormal vascularity .it is expanding the upper part of sterna body with flakes of calcification. It is displacing surrounding muscles with preserved fat planes.size is 6x 6.5 cm in its maximal dimension

SURGICAL FINDINGS-Sternal tumour involving upper sternum and lower manubrium.about 6 x 5.5 cm in dimension with tumour extending to rt 4 and

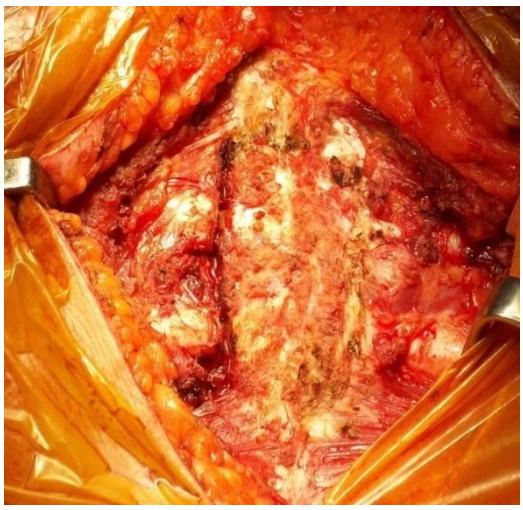
5 costal cartilages.pericardium free of tumour.no skin or muscular extension of tumour.

PROCEDURE-midline incision over sternum excising elliptical skin over tumour.layers deepened to reach periosteum.sternal region mobilised about 4cm all around tumour. Enblock excision of tumour done with 2cm margin all around tumour keeping lower sternum and upper half of manubrium intact for reconstruction.Remaining part of marrow scooped out from manubrium after excision of tumour and filled with hydroxyl appetite crystals.A composite implant made of double layered sandwich of prolene mesh and PMMA was used to reconstruct the sternal defect. Implant fixed to defect edges with sternal wires.bilateral thoracoacromian vessel based pectoralis major myocutaneous flaps was created for implant coverage and sutured in midline.wound layers closed with drains after hemostasis,

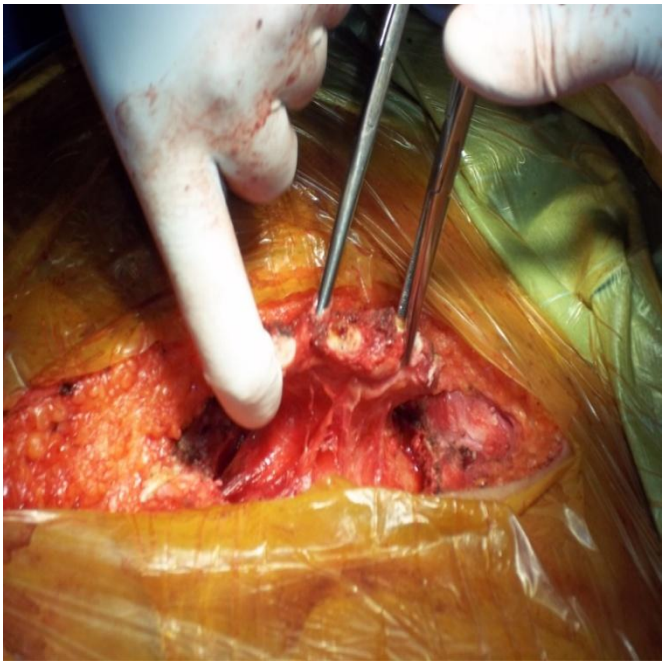
CT with lytic features



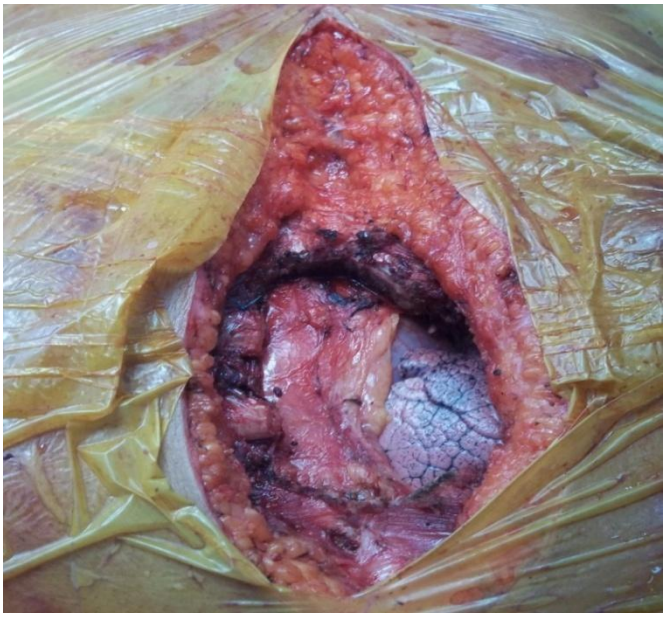
Involvement of costal cartilages



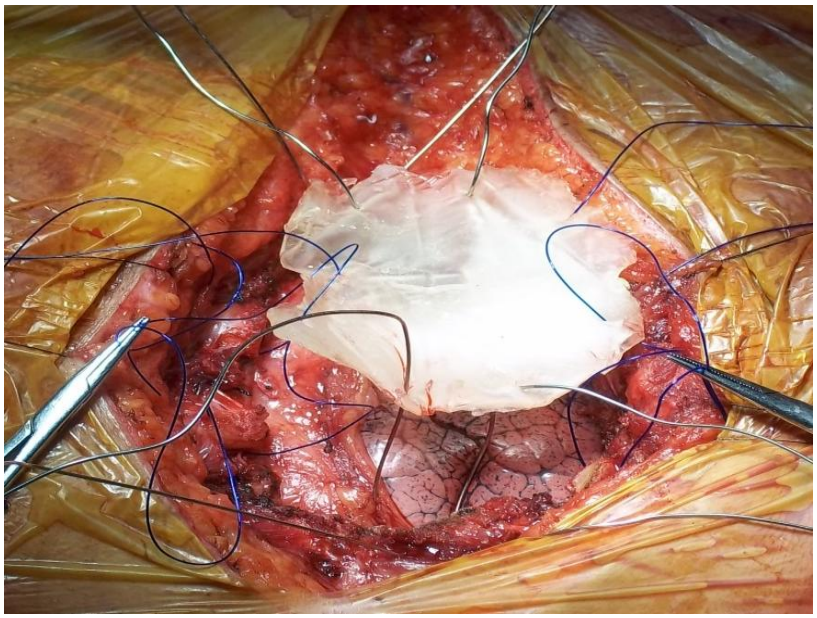
COSTAL CARTILAGES REMOVED

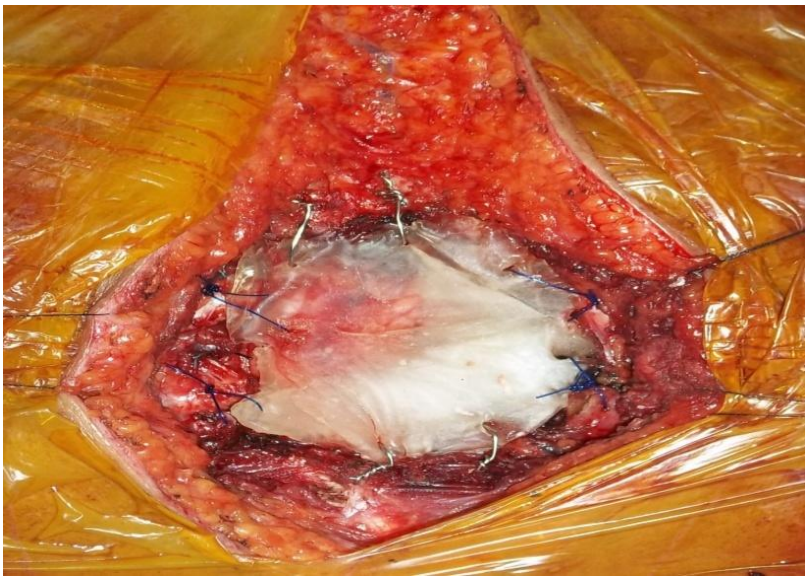


STERNAL DEFECT AFTER TUMOUR EXCISION



DEFECT CLOSED WITH PMMA





ASD CLOSURE VIA MINISTERNOTOMY

Diagnosis: - ACHD,OSASD,SR

History: - 6 year old boy, presented with h/o Recurrent LRTI from 6 months of age was evaluated and diagnosed to have ASD 1 year ago. H/o palpitations since 5 years, H/o occasional DOE Gr. II. No H/o cough, syncope or pedal edema. No Chest pain. No H/o RHD, IE,CHF. No family h/o heart disease.

Physical Examination: - Conscious and co operative. PR - 106/min. regular. BP: 100/60 mmHg, right arm supine position. JVP: Normal.

CVS: Apex beat at 5th LICS at MCL. S1 Normal. S2 loud with fixed split. P2 palpable, 3/6 ESM at pulmonary area. No thrill, Mild PSH +. **RS**: Clear B/L Equal. **CNS/PA**: NAD.

Investigations: -
CXR - CTR 48%. Prominent broncho vascular markings. Dilated RA. Lung fields Normal.

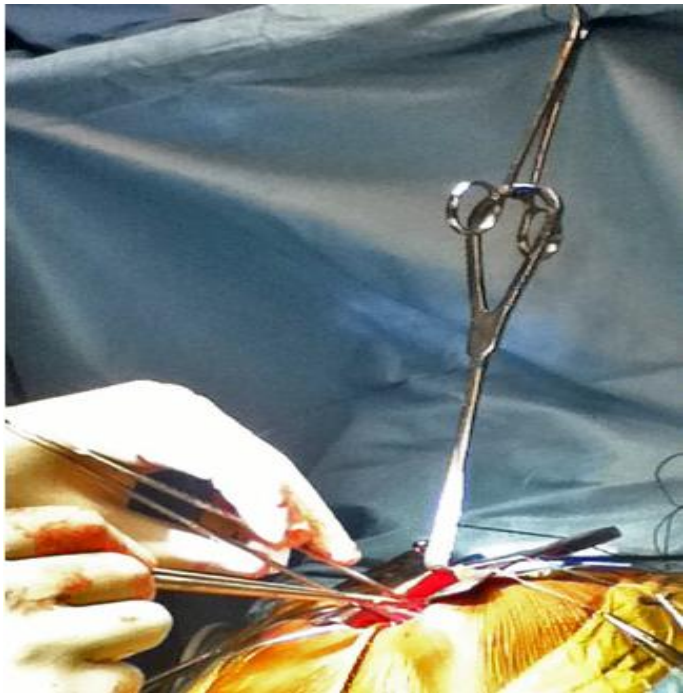
ECG - SR, incomplete RBBB, RAD + Axis 110,

ECHO - LV 28/19, RV 27, LA/Ao 26/16 , AV/MV Normal. EF 63%. Septal motion paradoxical. 16mm ostium Secundum ASD, L ->R. 3 PV's -> LA, Deficient mitral rim. No mitral cleft, Mild MVP of AML, No IVC rim. TR 1- 2+. RVSP 29 + RA mean

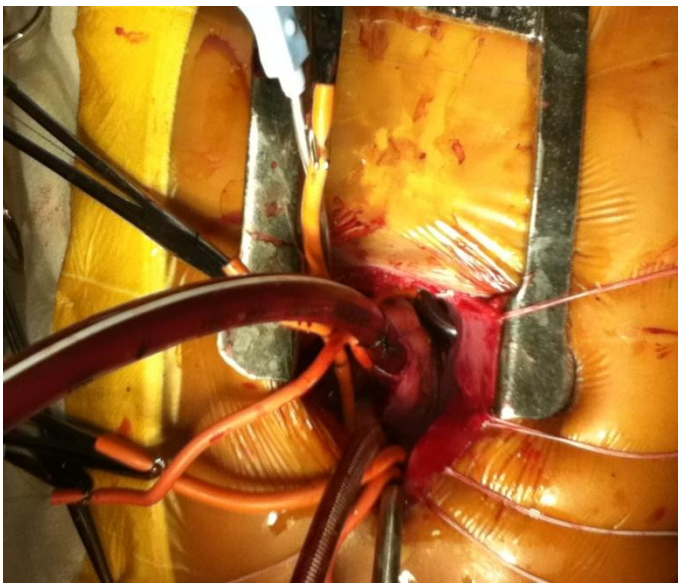
Surgical Findings:- SS,LC,NRGA,Normal systemic venous drainage.Normal PV drainage. RV and RA enlarged, pink and hypertrophic. 1.5 x 20 mm OSASD with deficient mitral rim. TV,MV,CS normal.

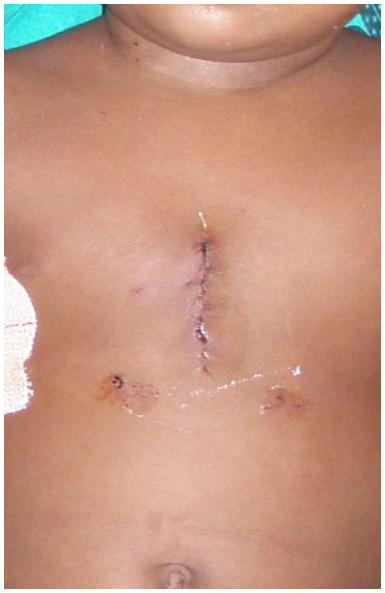
Procedure :- 4 cm skin incision. Lower midline sternotomy. Sternum lifted up with langenbeck retractor. Thymus excised. Pericardium opened and marsupialised. CPB instituted with Ao – bicaval cannulation. IVC cannulae through separate small skin incision from rt chest. Antegrade blood cardioplegia and prompt diastolic arrest.went on total bypass. RA opened and ASD closed TPP. RA closed, heart deaired and cross clamp removed. Came off CBP with adequate filling presuures. Decannulated. Hemostasis confirmed. Sternum approximated with 2 SS wires. Skin closed in layers.

Sternum lifted up with special retractor system



IVC cannulation through right chest





RUPTURED TYPE 5 TAAA

52 year old male admitted with Chest pain and Dysphagia of 2 weeks. Smoker HTN (+). No DM No H/O of trauma No TIA/CVA

PR: 70 / min Postural bradycardia BP: 150/90 mm Hg R/S: NVBS

CVS: S1 S2 (+) No murmurs. P/A:Pulsatile mass in upper abdomen measuring 6x 4 cms , upper border not palpable. All Peripheral pulses (+)

Blood investigations:

HB-13 gm% S.Cr: 1.0 mg/dl LFT- normal Coagulation profile- normal ECG: Bradycardia , SR

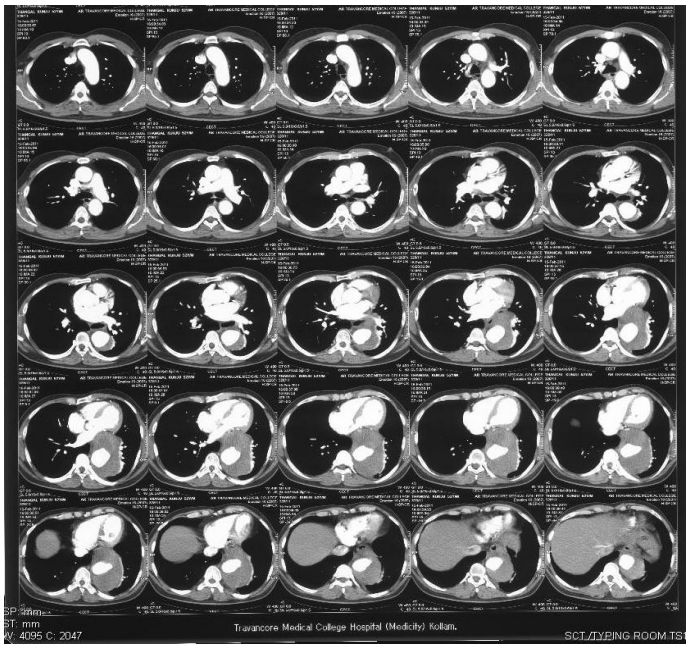
ECHO: No significant abnormality

CT : type 5 abdominal aortic aneurysm size 7.2 cm from mid DTA D5 level upto celiac ostium and small IRRRA of max size 3.5 cm ,ascending aorta measures 4.2 cm no flap seen.

On pre op day evening patient had a severe hypotension and bradycardia with only carotid pulse being palpable. resuscitated, Patient Stabilized in ICU, His hemoglobin had dropped to 6.6 mg%. Blood transfusion given. hemodynamically stabilized. Posted for TEVAR

PROCEDURE

TEVAR with MEDTRONIC VALIANT 40X220 mm. Placed from just distal to Lt. subclavian artery to just proximal to celiac artery.


Travancore Medical College Hospital (Medicity) Kollam.
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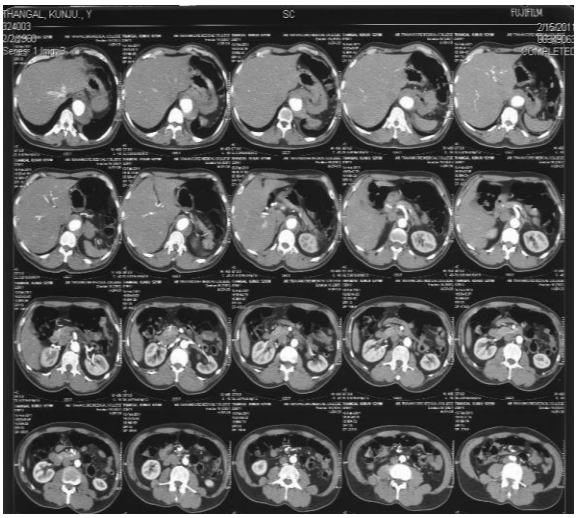
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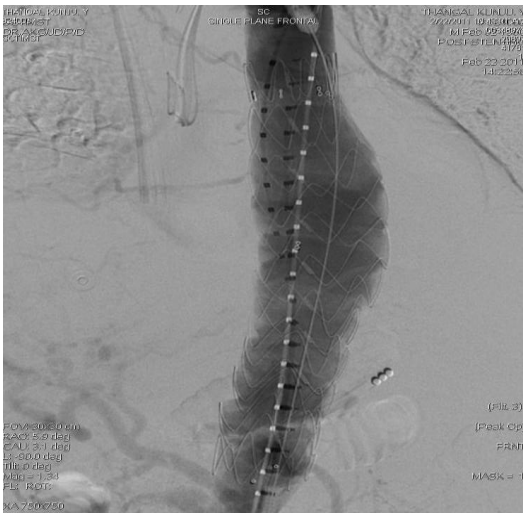

SC
SINGLE PLANE FRONTAL

RESECTION AND REIMPLANTATION OF COILED CAROTID WITH STENOSIS

A 78-year-old gentleman, diabetic, hypertensive and a reformed smoker, presented with recurrent left middle cerebral artery territory transient ischemic attacks.

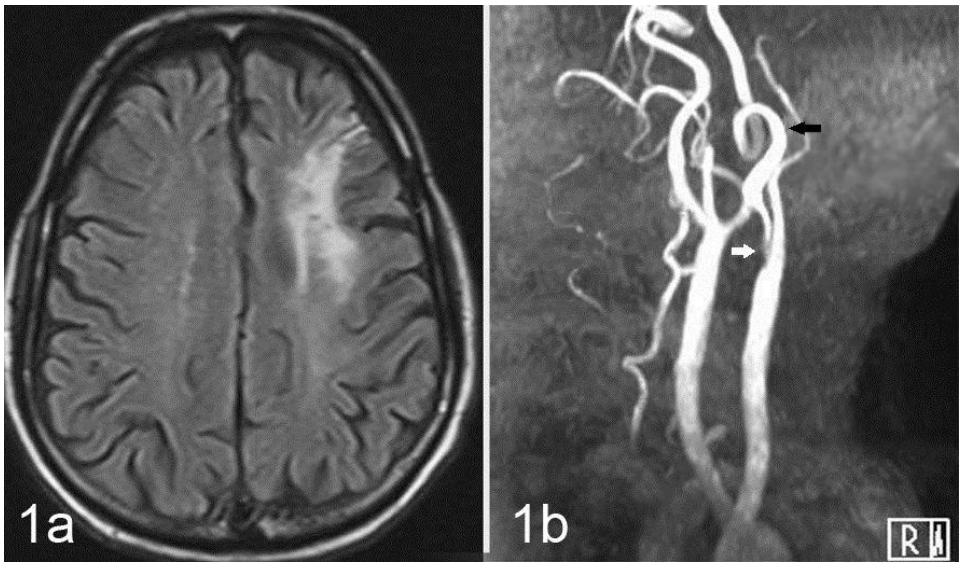
Clinical examination was unremarkable with Modified Rankin Score (mRS) of 0, except for left carotid bruit.

Brain MRI revealed a left fronto-parietal infarct and 'time-of-flight'(TOF) angiogram showed 70% stenosis of internal carotid artery(ICA) bulb with 360°-coiled distal ICA

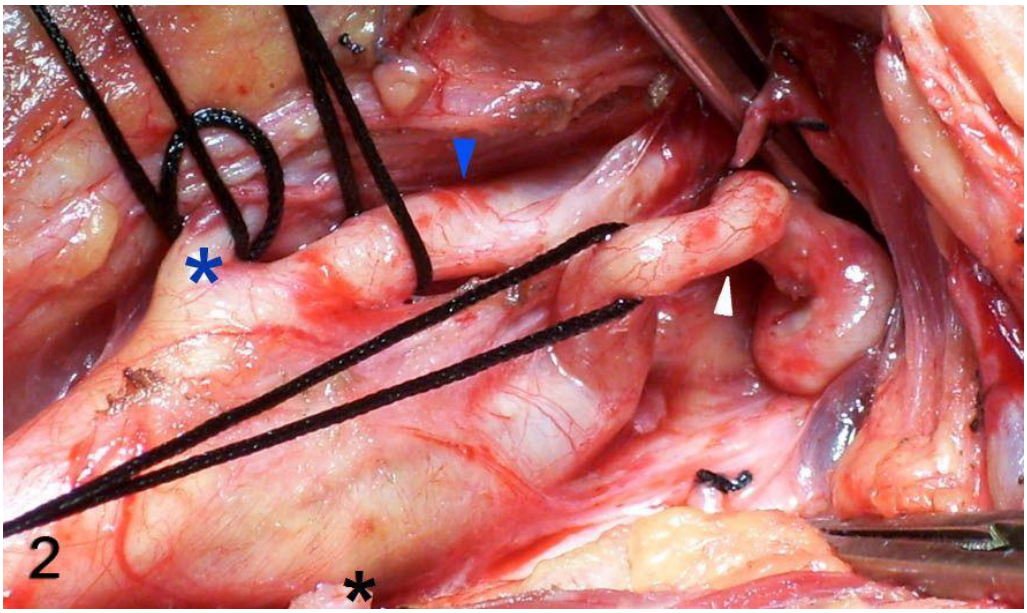
Although eversion carotid endarterectomy (eCEA) was the initial surgical plan, on account of the extreme coiling and redundancy of ICA seen intra-operatively the ICA bulb was transected at the bifurcation and the entire ulcerated plaque-bearing segment of ICA resected Local endarterectomy of the common carotid artery (CCA) bifurcation was then performed followed by re-implantation of the spatulated ICA onto the carotid bifurcation. He made a smooth post-op recovery and at 1 year follow-up, he is symptom free and duplex ultrasound shows patent ICA.

1a Brain MRI revealed a left fronto-parietal infarct

1 bangiogram showed 70% stenosis of internal carotid artery(ICA) bulb with 360°-coiled distal ICA



Coiled ICA



(3a) Resected plaque-bearing segment of ICA bulb was transected at the bifurcation (3b) Reimplanted ICA