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Best Practice 2

**1. Title of Practice**

Well equipped cath lab with low cost interventional procedures

**2. Objectives of the practice**

- To perform coronary angiography & \ Coronary angioplasty for diagnosis and risk stratification of coronary artery disease in subsidized rate so that most of the patients can afford these facilities & Poor patients can avail these facilities free of cost through government scheme like Mahatma Jyotiba Phule Jeevandayee Yojana.
- To provide temporary pacemaker and permanent pacemaker insertion procedures to the patients with Brady arrhythmias in subsidized rate.

**3. The context (Challenging issues)**

- It requires highly trained staff for operating the C-arm and assisting the procedure.
- During procedure patient may have sudden cardiac arrest, angina, coronary dissection or perforation. Defibrillator, ventilator support may be required, hence these equipment are always maintained in a cathlab.
- Trained doctors needed to handle emergencies occurring during procedure
- Emergency drugs like adrenaline, atropine, dopamine, dobutamine, amiodarone, must be loaded during procedure.



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**4. The Practice (cardiac catheterization)**

- Patients are admitted from Causality and OPD and accessed, diagnose and treated by Resident doctors, consultants.
- Patient and relatives are informed about treatment plans adversary actions, expenditure of treatment.
- For the procedure proper consent from the patient or patient's relatives is obtained.
- Resident doctor posted in ICU or cathlab reassess the patient's vitals.
- Cardiac catheterization initiated under all aseptic precautions by cardiologist.
- Arterial access (Femoral or Radial) is obtained by Seldinger technique. 5F or 6F sheath is introduced over guide wire.
- Low osmolar nonionic iodine contrast agent is injected and cine images obtained using the C-arm in various projections.
- Typically about 50 ml contrasts is used in coronary angiography and 100 to 300ml in angioplasty.
- Coronary angioplasty involves passing a 0.014" coronary guide wire in the coronary artery. Various balloons can be passed over this wire across the lesion which is then dilated. A stent is implanted over this diseased segment.

Permanent Pacemaker implantation involves implanting a pacing lead via subclavian vein which is screwed to RV and/ or and other end attached to generator. The generator is secured in a subcutaneous pocket just under the clavicular bone.

- Vitals and ECG is monitored in real time.
- Usually 15-20 min duration required for coronary angiography and 45 min to 1 hour required for coronary angioplasty. Post procedure vitals and ECG are recorded.
- The recording of procedure in CDs/DVDs form to be taken and given to patients.
- Post procedure removal of sheath to be done under all aseptic precautions with all emergency drugs ready as patient may land up in vasovagal attack during sheath removal.
- Daily and monthly record of the procedures to be kept and maintained by trained in charge staff of cathlab.

**4. Evidence of success-**

- As per 3 years data, number of cardiac catheterization procedures have increased every year
- More patients are benefited by treatment under Mahatma Jyotiba Phule Jeevandayee Yojana .Patients not eligible for MJPIY are offered treatment under subsidized rates .Thus many lives have been saved.
- The complication rate is less and at par with that recorded in other centers.

Year	No of CAG	No of PTCA	No of PPI
2017-2018	496	128	08
2018-2019	670	205	12
2019-2020	739	201	06



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**6. Problems encountered and resources required—.**

- As cases of coronary Angiography and Angioplasty are increasing, there is increased requirement of trained cathlab staff and technicians.
- Cost of drug therapy apart from coronary Angiography and angioplasty is high. So many patients are not adherent to post discharge treatment protocol. Hence, there is need to provide drugs at a subsidized rate.

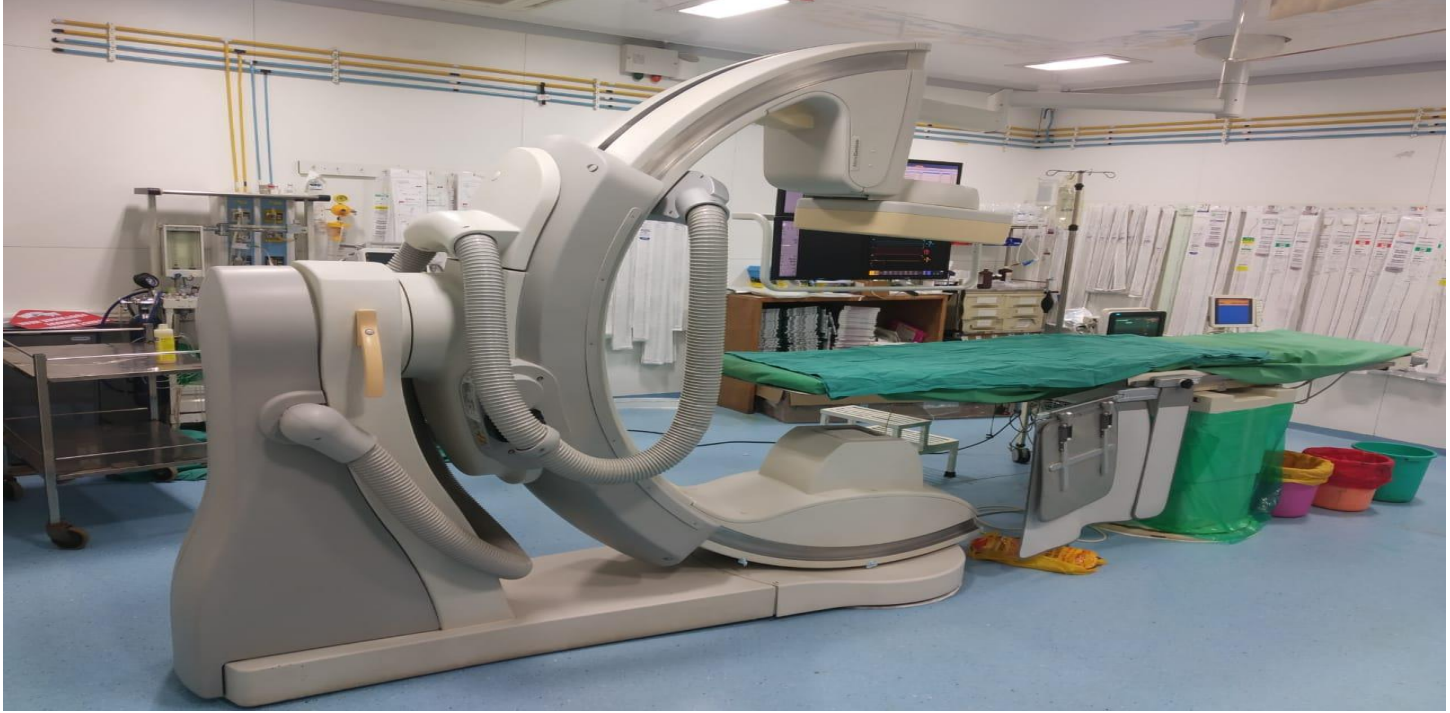
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