Original Research Paper

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Anesthesiology

ANAESTHETIC MANAGEMENT OF A CASE OF SICK SINUS SYNDROME COMING FOR RIGHT OPEN INGUINO SCROTAL HERNIOPLASTY

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ABSTRACT Patient with permanent cardiac pacemaker provides unique challenges to anaesthesiologists. Anaesthetist has to be cautious about pacemakers and their components which includes battery life, mode of pacemaker, indication for pacemaker placement and also to rule out any pacemaker failure after placing permanent pacemaker. We present a case of 55 years of male came to hospital with right inguino scrotal hernia he was a known case of sick sinus syndrome with permanent pacemaker VVI mode, after all routine investigation , he was posted for right open inguino scrotal hernioplasty under spine anaesthesia. In this study we have discussed about the management of patients with sick sinus syndrome and its importance.

KEYWORDS : Permanent Pacemaker, Hernia, Sick Sinus Syndrome.

INTRODUCTION:

Sick sinus syndrome is characterized by giddiness, sinus bradycardia, chest pain, confusion, fatigue (1)and treatment includes permanent cardiac pacemaker implantation. Other causes includes Iatrogenic aortic sinus, hyper trophic obstructive cardio myopathy, Acquired AV block(2). Electromagnetic interference (3)has to be prevented in patients with permanent pacemaker as it can interfere in functions of pacemaker like rate alteration, sensing abnormalities.

Case Report:

A 55 year old male came with complaints of swelling in the right groin for the past 3 months. History of pain for past 4 days. Patient was apparently healthy 3 months ago, when he notices a swelling in the right groin while lifting heavy weight. Initially the swelling was of the size 2*2cm which gradually progressed to the present size of approximately 10cm and reached up to the bottom of the scrotum. Swelling increases in size on coughing, straining. Swelling does not reduce on lying down. He is known case of systemic hypertension for the past 15 years on T. AMLODIPINE 10mg once daily. Known case of sick sinus syndrome for the past 8 years, on permanent pacemaker VVI mode on T. ASPIRIN 75mg Once daily. No history of light headedness, confusion, syncope, fatigue, shortness of breathe(4). Patient is conscious, oriented, a febrile. No pallor/icterus/cyanosis/ clubbing/edema/ lymphadenopathy.

Vitals: HR-62/min(fixed) BP-130/80mmHg SpO2-98%in RA. MPC: II Neck movements: not restricted. Spine: Normal Teeth: No artificial denture/loose tooth. Height:160cm weight: 65 kgs

Local examination of swelling showed a pyri form shaped swelling of size 10*8cm in vertical horizontal direction is present in the right inguino scrotal region extending from mid inguinal region up to the bottom of the scrotum with ill defined borders. Visible peristalsis can be seen over the swelling. Deep ring occlusion test is positive. All baseline investigations were normal. ECG attached (FIG 1) Cardiac evaluation showed(FIG 2).Chest X ray showed permanent pacemaker in situ.USG ABDOMEN Inguino scotal hernia of size 10*8 cm with omentum as content. Cardiology opinion and risk stratification for surgery was obtained. Pacemaker follow up chart showed indication for pacemaker, mode of pacemaker, functioning and battery life. Pacemaker mode from VVI changed to VOO before surgery. High risk and post operative ICU , ventilator consent obtained. Arterial line consent obtained. Patient was taken up for surgery under ASA III. Appropriate Operation theatre preparations were made. Patient shifted to Operating room, standard monitors were connected .Large bore Intravenous lines were secured. Invasive blood pressure monitoring was done by securing left radial artery under local anaesthesia. INJ.ISOPRENALINE and other emergency drugs were kept ready. Emergency pacing equipments and defibrillators were kept ready. Cautery plate kept close to the operating site and surgeons are advised to use bipolar cautery. We proceeded with SPINAL ANESTHESIA with drug volume of INJ.HYPERBARIC ROPIVACAINE0.75% 2.4ml + 20 mcg INJ.FENTANYL. Level achieved till T8. There is no hemodynamic changes noted during intra operative period. Minimal blood loss noted. Patient shifted to post operative ward. Post surgery mode of pacemaker changed again to VVI.

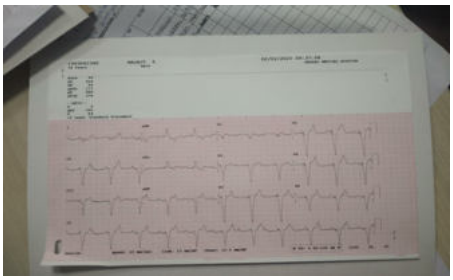
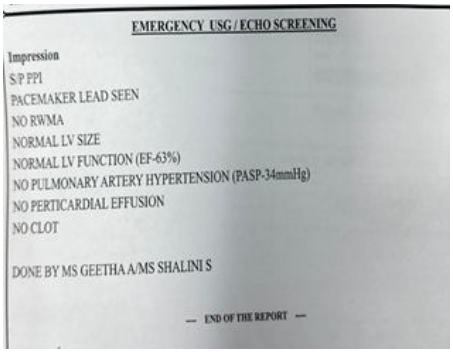


Fig 1



EMERGENCY USG / ECHO SCREENING

Impression

S/P PPI

PACEMAKER LEAD SEEN

NO RWMA

NORMAL LV SIZE

NORMAL LV FUNCTION (EF-63%)

NO PULMONARY ARTERY HYPERTENSION (PASP-34mmHg)

NO PERTICARDIAL EFFUSION

NO CLOT

DONE BY MS GEETHA A/MS SHALINI S

— END OF THE REPORT —

Fig 2

DISCUSSION:

Patient with permanent pacemaker coming for surgery is challenging for anaesthetist. Hence proper precautions has to be made before proceeding the surgery. In this case we proceeded with spinal anesthesia than general anesthesia as it was a below umbilical surgery and cardiac functioning of the patient was also normal. Special care was taken for electromagnetic interference as it can cause rate alteration, sensing abnormalities, reprogramming of pacemaker. Hence use of bipolar cautery advised and ground plate was placed close to the operating site. Asynchronous mode(VOO) was changed as it will deliver fixed rate inspite of patient intrinsic cardiac activity.

CONCLUSION:

Patients with permanent cardiac pacemaker has to be evaluated and adequate preoperative pacemaker functioning has to be checked and optimized to prevent pacemaker failure ,all emergency pacing devices has to be kept ready inside operating room to avoid intra operative

complications.

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