



Procedure Information – Intra-Aortic Balloon Counterpulsation

Visit No.: Dept.:
Name: Sex/Age:
Doc. No.: Adm. Date:
Attn. Dr.:
Patient No.: PN

Page No:

01	02	03	04	05	06	07	08	09
+10	+20	+30	+40	+50	+60	+70	+80	+90

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affix patient's label*

Introduction

Intra-aortic balloon counterpulsation (IABP) is an invasive procedure. It is a big balloon (of 30-50 cc) placed in aorta by percutaneous approach through X-ray guidance. It inflates and deflates according to heart rhythm. The aim is to raise blood pressure during diastolic phase. This can increase coronary blood flow and cardiac output.

Importance of Procedure

IABP is indicated in patients having cardiogenic shock, refractory angina, severe aortic stenosis, or critical coronary artery disease requiring urgent treatment. It is usually done in emergency situation. It may be done in connection with other procedures such as percutaneous coronary intervention or when emergent transfer to another institute is necessary. If this procedure is refused, the condition of patients can deteriorate rapidly, or other life-saving procedures cannot be performed. Alternative treatment methods include medical treatment or other circulatory assist devices.

The Procedure

1. This is an invasive procedure that is performed under local anesthesia in a cardiac catheterization centre, X-ray room or ward.
2. A small wound is made from the groin for access to the aorta. A sheath is placed in the groin.
3. A balloon of size 30-50 cc is placed in the aorta under X-ray guidance.
4. The balloon is connected through a catheter to a portable machine with a console showing parameters.
5. The balloon can be inflated with helium gas. The inflation and deflation is synchronized with the heartbeat.
6. The sheath and the catheter are secured with stitches on the thigh.
7. Concomitant procedures may be performed after IABP insertion, or immediate transfer to another institute may be necessary.

Risks and Complications

The risk is higher if arteries are diseased or tortuous.

A. Major complications

- Death
- Arterial dissection
- Very occasionally, leg amputation is required if leg ischaemia cannot be treated.
- Leg ischaemia
- Valvular injury
- Stroke
- Severe bleeding

B. Other possible complications

- Infection
- Bleeding
- Balloon rupture.
- Bruising around the wound site is common.
- Allergy to contrast reaction
- Nausea
- Groin complications

Before the Procedure

1. Your doctor will explain to you the reason, procedure and possible complications. You will need to sign a consent form.
2. Your blood pressure, heart rate, blood oxygen and electrocardiogram will be monitored closely. An intravenous drip site will be set up.
3. Shaving may be required over the puncture site.
4. If you are a female, please provide your last menstrual period (LMP) as this procedure involves exposure to radiation.



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After the Procedure

A. Hospital care

1. Nursing staff will check your blood pressure, pulse and wound regularly.
2. Blood thinning drug has to be given to avoid clot formation on the device.
3. Do not move or bend the affected limb. It is also important to keep lying flat as far as possible in order to avoid catheter kinking.
4. You should inform your nurse if you feel discomfort or find blood oozing from the wound site.
5. IABP will be gradually weaned off and the balloon catheter withdrawn once your condition is stable and the underlying cause treated. It may take days but very occasionally more than 1 week.
6. After balloon removal, the groin wound will then be compressed or sutured to stop bleeding. Whenever you cough or sneeze, please apply pressure on the wound with your hand.

B. Follow up

1. The wound will be covered with light dressing. Please keep the wound site clean and change dressing if wet. In general, showers are allowed after 3 days.
2. Please avoid vigorous activities (household or exercise) in the first 7 days after IABP is removed. Bruising around the wound site is common and usually subsides 2-3 weeks later. If you notice any signs of infection, increase in swelling or pain over the wound, please come back to the hospital or visit a nearby Accident and Emergency Department immediately.
3. Your doctor has explained to you the results of the procedure and subsequent management plan.

Remarks

This is general information only and the list of complications is not exhaustive. In special patient groups, the actual risk may be different. Should a complication occur, another life-saving procedure or treatment may be required immediately. For further information please contact your doctor.

Reference

Hospital Authority – Smart Patient Website

I acknowledge that the above information concerning my operation/procedure has been explained to me by Dr. _____. I have also been given the opportunity to ask questions and receive adequate explanations concerning my condition and the doctor's treatment plan.

Patient / Relative Name

Signature

Relationship (if any)

Date