"A-Line" or "Intra-Arterial Catheters"

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Citation

Abstract
This article explains briefly what the "so-called A-line" is and why it is used by your anesthesiologists (the doctors putting you asleep for surgery).

THE A-LINE
An intra-arterial catheter (A-line) is a very small plastic tube (called catheter) placed in one of your blood vessels (an artery) by highly trained personnel. This is usually done during or before certain types of surgery or in the Intensive Care Unit.

REASONS FOR PLACING A-LINE
- To watch your blood pressure very closely
- To draw frequent blood samples for lab tests
- To test for the oxygen saturation in the blood (check how much oxygen is in your blood)

METHOD OF PLACEMENT OF A-LINE
This is usually placed on the inner side of the wrist. It could also be placed in the artery on the inner side of the elbow, the groin or the foot.

Figure 1
Figure 1: The equipment used to place an A-line

The area is decided mainly upon how well your pulse is felt. That area of the skin cleaned well with a disinfecting solution and alcohol.
Then, the pulse is felt. With a small needle the skin is numbed with local anesthesia. Then, using a needle with a plastic catheter the skin is entered.

Once inside the artery, the plastic catheter is advanced further in and the needle is removed.

The catheter is then connected to some tubing.
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Figure 6
Figures 6 and 7: Connection to tubing

Figure 7

Figure 8
Figure 8: Covering area with a bandage

Figure 9
Figure 9: View of an anesthesia monitor (red line is the one measured from the A-line. It measures the blood pressure every beat of the heart)

POSSIBLE COMPLICATION OF THE PROCEDURE

This is a very safe procedure, performed by highly trained professionals. The rare complications of this procedure are local infection, bleeding damage to surrounding tissues and blockage of the artery in which the catheter was placed.

THINGS TO WATCH FOR WHILE YOU HAVE THIS LINE

Let your physician know when any of the following occurs:

- Redness around the catheter insertion site.
- Disconnection of the catheter from the tubing.
which may result in bleeding.  

- In the extremity in which the catheter is placed watch for numbness or pain in the fingers.

References
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