

Arterial Line Placement

University Neurosurgery Information Sheet

General indications for the procedure:

Critically ill or injured patients frequently have abnormalities in their blood pressure. The arterial line provides a way to constantly measure a patient's blood pressure and may be essential to the stabilization of the patient. Arterial lines may be useful in patients with very high or low blood pressures. The arterial line also provides access for frequent blood sampling. Blood can be withdrawn from the patient through the arterial line tubing without having to use a needle for each blood draw.

Description of Procedure:

Arterial lines may be inserted in the wrist (radial artery), armpit (axillary artery), groin (femoral artery), or foot (pedal artery). The arterial line is inserted into the artery by the same technique used to insert a regular peripheral IV catheter. The arterial line is usually sutured (sew) to the overlying skin to assure that it remains in the artery. An arterial line insertion causes similar discomfort to that associated with the insertion of a regular peripheral IV. The arterial line tubing is connected to a bedside monitor, where the patient's blood pressure is constantly displayed.

Risks of the Procedure:

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.

Procedure Alternatives, if any:

Standard, less accurate blood pressure cuff monitoring can be used to approximate central blood pressure. Blood specimens, however, can not be obtained.

Probable Consequences of Refusing Procedure:

Inability to adjust sensitive therapy because of less accurate blood pressure monitoring.

Person(s) Performing the Procedure:

The surgical team for this procedure may include attending surgeons and/or resident surgeons. Everyone involved will be performing important tasks related to the procedure in accordance with the hospital policies, and based on their skill set and under the supervision of the responsible practitioners.