Novel Arm Board Design For Catheterization Labs

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Technology description

Current cath labs do not include arm boards dedicated for use in transradial catheterizations, therefore cardiologists at UCSF have designed arm boards with key features that will enable physicians to specifically and efficiently carry out transradial catheterizations.
Design features:
Supports broad range of patient heights and weights - one size fits all.
Easily adjustable during procedure, utilizing a novel mechanism.
Arm board is permanently assembled on to cath lab table, enhancing ease of use for nursing staff.
Fully retractable, so will not be "in the way" when transfemoral cases are performed. Will suit multiple operator cath labs.
Constructed from radiolucent material.
Improved work flow.
In the U.S. alone, four million cardiac catheterization procedures are performed every year. Percutaneous catheterization is used in the clinics to both diagnose and treat cardiovascular diseases by introducing a catheter into an artery and guiding it towards the heart where various procedures are performed, such as angioplasty, stent placement, imaging and cardiac measurements. These procedures take place in a specialized catheterization laboratory ("cath lab") while a patient is lying on a radiolucent table. An X-ray machine allows the physician to visualize the catheter throughout the process.
Until recently, percutaneous catheterizations were primarily performed by inserting a catheter through the femoral artery located in the upper thigh, however this can lead to complications. As a result, the use of transradial catheterization, where a catheter is guided through the radial artery in the wrist, has grown. During the transradial intervention, the arm must be placed on an arm board because the cath table is, out of necessity, too narrow to accommodate this.
The use of transradial interventions is increasing in the U.S. and is the dominant procedure in many European and Asian countries.

Additional Information

Additional Technologies by these Inventors
Novel Topical Composition to Provide Local Anesthesia and Facilitate Radial Artery Cannulation

Application area

Arm board design can be incorporated into new cath lab table models.
Arm boards can be manufactured and sold for use with existing cath labs.

Advantages

1. Fewer complications - less bleeding and therefore less chance that a blood transfusion is needed.
2. Faster procedure - results in greater patient turnover and increased revenue for facilities, including reduction in nurse overtime pay.
3. Quicker recovery - same day release, rather than overnight stays.
4. Greater patient comfort - no need for immobilization, back pain and time to ambulation are reduced.
5.Allows physician to properly and more efficiently perform transradial catheterization procedures, resulting in increased patient safety.

Institution

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