Posing The Patient

With the possible exception of photography, there is perhaps no other endeavor in which the position of the subject (a.k.a. patient) is as crucial as it is in surgery. The positioning of the patient on the surgical table can have an immense impact on the success of the surgery, and on the patient's general outcome.

The appropriate positioning of a surgical patient is, naturally, in the best interest of the surgeon. A well positioned patient affords the surgical staff efficient and comfortable access to the surgical site. But proper positioning greatly affects the patient as well. Cardiac and respiratory problem, excessive intraoperative bleeding, and pressure damage to skin and nerves can all result if a patient is positioned poorly or is not properly supported.

Naturally, as surgery continues to develop, and as patients get progressively larger, proper positioning can pose a problem. This has opened up a specialized and growing market segment for those who furnish the modern OR. A number of companies are now producing a wide variety of general and specialized patient positioning devices.

Skytron, a world leader in the manufacturing and marketing of surgical tables, complements its line of tables with an array of positioning aids that allow patients to be arranged for both conventional and challenging surgical procedures. The company's focus on safe an effective patient positioning can be seen in the tables themselves, which are designed to address pressure management issues. Skytron offers a variety of table top surfaces to reduce the risks of forming surgical casual decubitus sores.

To accommodate the handling and positioning of large and obese patients, Skytron offers table side extensions that can increase the width of the surgical table to a full 30 inches. Extra wide foot boards safely capture the feet of the patient, which is critical for patients in the reverse Trendelenburg position. Thicker table surfaces better accommodate the large patient, while robustly built and larger boot leg holders comfortably and safely position the patient. A number of the tables also offer a split leg section for perineal approaches for gastric bypasses and the like.

Other positioning systems and devices offered by Skytron are in the form of extensions and accessory packages for their tables. The orthopedic extension can be attached to a Skytron table to offer greater positioning capabilities for hip displacement and lower extremity reductions. Lightweight carbon fiber extensions and armboards can improve or create the necessary imaging solutions demanded for triple "A"s, AV Fistulas, and orthopedics.

Skytron's shoulder chair is designed to substitute the removable table back section on the company's Hercules 6700B and UltraSlide 3600B surgical tables. The design and position of the shoulder chair provides safe patient transfer and setup because it provides a full width and length surface, and keeps the patient in normal table orientation. The patient is positioned with the power of the table rather than being manually raised or lowered. Plus, with the back/leg section of the table removed, the surgical approach is maximized.

An industry leader in patient positioning for over twenty years, Innovative Medical

Products (IMP&reg) has designed its positioning devices to be used in the clinical setting. Providing more than just stable positioning, these devices can act as a second pair of hands for the primary surgeon, allowing manipulation of the patient position for greater access. Many IMP positioners are applied directly to the OR table within the sterile field.

IMP offers positioning devices for a number of indications. For Hip Arthroplasty they have the Universal Lateral Positioner&#153, the MorphBoard&#153 Positioning System with a table extension kit, and the DeMayo Hip Positioner&#153. All of these devices were also designed to accommodate larger, bariatric patients. The Large-size Universal Lateral Positioner is designed with independently adjustable and removable anterior arms to accommodate large and obese patients while maintaining good iliac crest contact, and the MorphBoard is a modular component system that easily converts from standard to bariatric configuration. The De Mayo Hip Positioner&#153 has a cross arm design which eliminates pressure on the patient’s abdomen and swings away to allow the surgeon clear access.

To address certain positioning problem in the rapidly growing field of laparoscopy, IMP now offers the Lap-Wrap&#153 Positioning Pad, designed to protect the neurological structures of a patient’s elbow while maintaining the arms in the tucked position for the laparoscopic procedure. The LapWrap allows the Anesthesiologist and OR staff easy access to leads, IV tubing, and wires during the surgery without disturbing the desired arm position. Further, the LapWrap provides a warming effect for the patient, helping to reduce the potential loss of body heat.

In addition to these advanced positioning devices, IMP offers the De Mayo Knee Positioner&#153 and the Universal Knee Positioner&#153 for Total Knee Arthroplasty. For the lower extremity Trauma setting, they have the Tibial Distractor&#153, Knee Positioning Triangles, and Sterile Arthroscopy Post&#153. Also available are IMP Gel Pads for positioning support in all surgical settings. IMP holds patents and/or exclusive distribution rights on every product they offer.

Action Products offers over 150 patient positioning products, providing devices for all positioning applications including the needs of cardiovascular, orthopedics, neurology, and ophthalmology specialties. The wide range of sizes meets the positioning requirements of all patients including pre-mature infants, full-sized adults, and obese patient.

The positioning products are made of Action’s proprietary formula, AKTON&reg dry viscoelastic polymer, a tissue equivalent material that does not leak or flow like a gel. Its inherent properties address perpendicular pressure and shear forces exerted on the surgical patient. The AKTON products are all latex, plasticizer, and silicone free, and do not support bacterial growth. Reusable and easy to use and maintain, they are very cost effective.

Action’s standard products are extremely effective for positioning bariatric and obese patient. The nature of AKTON polymer allows it to withstand the higher pressures produced by the larger patient, unlike product such as foam that tend to bottom out or flatten, making them essentially ineffective. Action also offers a range of large sizes for products such as ulnar pads, contoured armboard pads, prone headrests, and specially sized OR table mattress pads to help the healthcare professional manage the needs of larger patients.

STERIS Corporation offers a broad range of surgical patient positioning systems designed to meet a variety or clinical requirements common in today’s modern ORs. Their newest offering is the Cmax&#153 General Surgery Table, which offers an

extensive combination of the most important features required by all surgical specialties. It was specifically designed to accommodate both current and future surgical procedures and device technologies. For example, it provides an 1,100-pound weight capacity for prone and supine positions and a 900-pound capacity for patient articulation.

STERIS also offers a full line of surgical accessories that transform the company's surgical tables into optimal platforms for every surgical specialty. The latest STERIS accessories include a shoulder arthroscopy positioning device, orthopedic extension accessories, imaging accessories, full weight-bearing bariatric table extensions, bariatric and standard PowerLift&#153 lithotomy stirrups, straps, and a full range of accessory storage devices and carts.

STERIS's newest offering to address patient positioning is the Aquagel Pressure Management System, a unique line of surgical patient positioning devices with revolutionary design, form, and function. The Aquagel pad system offers independent dual gel layer construction, ergonomically engineered technology, and uniquely contoured positioners.

David Scott Company manufactures and distributes a complete line of viscoelastic polymer gel positioners called Blue Diamond&reg. This product line consists of chest rolls, sandbags, full OR Table pads, as well as head, arm, elbow, foot, heel, and specialty gel pads. Blue Diamond gel positioning products are completely latex-free, X-ray translucent, antimicrobial, antibacterial, and plasticizer free. These reusable gel products will not leak or ooze, are easily cleaned, and can be repaired if compromised.

David Scott also offers a comprehensive line of OR positioning devices including BeanBag positioners, stirrups, shoulder chairs, knee crutches, armboard pads, and much more. The BeanBag positioners have a repairable/replaceable valve, allowing users to get extended life from the product. It is also available with a beanbag gel overlay for added protection and greater patient comfort.

In addition to the Blue Diamond line, David Scott offers a reusable foam head and prone positioner which consist of doughy-soft viscoelastic memory foam. These Light Cloud&#153 positioners have a thin flexible skin, which is puncture and tear resistant.

Allen Medical Systems is a developer of a variety of patient positioning devices and systems, with products designed for use in gynecology, laparoscopy, urology, orthopedics, arthroscopy, and bariatrics. Among their most innovative offerings is their line of stirrups, which include the Yellofin&#153, PALPro&#153, and Ultrafin&#153. These stirrup systems utilize the exclusive Biotrac Joint Technology that mimics the natural motion of the hip. The stirrups also provide a single handle control for infinite movement in both abduction/adduction and lithotomy positioning.

New to Allen Medical's patient positioning offerings are the Siegel MAST Intraoperative Leg Positioner and the Allen&reg Spinal System. The Siegel MAST Leg Positioner allows the surgeon to place the leg in any position required for knee surgery, and have it automatically lock in place. An ergonomic unlocking lever allows the leg to be easily repositioned by grasping it and moving it to the desired location, where the positioner automatically locks. The device can maintain extension, flexion, hyperflexion, valgus, and figure-4 positions without helping hands. The Allen Spinal System attaches to existing OR tables, enhancing C-Arm access while the body supports and prone positioner adjust to fit the patient. It

allows the patient to be lowered to 31 inches for improved site access. Set-up requires just three simple steps and the system is locked into place.
These are some of the latest and greatest innovations currently available to the surgical market, and there are many other patient positioning products to choose from. For virtually any procedure, there is some device available, or possibly being developed, that can provide the patient and surgeon even greater comfort.

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