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Technical Paper

The Use of the Trimano FORTIS® Support Arm (Arthrex) for Elbow Surgery

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Background

Open elbow surgery is commonly performed with the patient in the lateral decubitus or prone positions. They have patient limitations (pressure related nerve injury and contraindicated in patients with unstable spine or pelvic pathology), surgical limitations (C-arm access) and anaesthetic limitations (airway access and poor ventilation due to diaphragm splinting).[1]

The Lloyd-Davis support as a static arm positioner can facilitate supine positioning, which addresses the aforementioned issues.[2] However, it requires a bolster under the ipsilateral shoulder, cannot be changed during surgery, making c-arm access difficult, its bulky sides inhibit medial and lateral elbow access, and it cannot be moved quickly for urgent airway access.

The Trimano FORTIS® support arm (Arthrex) may offer advantages as a dynamic arm positioner by overcoming several limitations associated with the Lloyd-Davis support.

Technique

With the patient supine, the Trimano is mounted to the contralateral table rail, padded with a gel interface and positioned over the face. The limb is placed across Trimano (Figure 1). The arm is prepped and draped in the usual manner with no need for additional consumables.

The Trimano can be manipulated to vary the elbow flexion throughout the procedure and does not require a bolster under the ipsilateral shoulder (Figure 2,3).

Figure 1. Operating arm supported on Trimano FORTIS® in supine position.

Figure 2. Lateral view showing patient positioning and the absence of bolster.

Figure 3. Use of Trimano FORTIS® with intraoperative fluoroscope.

Discussion

The Trimano FORTIS® enables safe and effective elbow surgery in the supine position. It has been used in our unit across multiple trauma and elective cases without observed complications. [1-2]

Declarations

Conflict of Interest

The authors declare no conflict of interest. The authors have no financial relationship with Arthrex.

Funding

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Ethical Approval

Ethical approval was not required for this technical note as no patient-identifiable data were included.

Consent for Publication

Written informed consent was obtained for publication of the clinical images.

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