The General Principals of Patient Positioning and Setup

1

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In this book, we describe many surgical techniques, some of which are technically demanding. Although these operations differ significantly in many ways, the initial positioning and setup of the patient generally remains the same.

- The procedure is performed under general or spinal anesthesia. Less commonly the procedure can be performed with a nerve block and mild sedation.
- The patient is positioned on the operating table in the supine position. A padded horizontal post is positioned distally on the table to hold the knee in a 90° flexed position. This has the advantage of allowing the knee to be held at either 90° of flexion (when the heel rests on the post) or 110° of flexion (when the toes rest on the post) without changing the post position (Fig. 1.1a). A second post can be placed proximally on the table to allow a position of hyperflexion (Fig. 1.1b). The posts do not obstruct full extension (Fig. 1.2). In the situation of a stiff knee with limited flexion, the second post can be placed distally in order to maintain the knee maximally flexed during the first step of the arthrolysis.
- A lateral support controls the rotation of the hip, with the thigh resting on the support. Slight external rotation of the hip is set prior to inflation of a pneumatic tourniquet (Figs. 1.1 and 1.3).
- The pneumatic tourniquet is placed as high as possible on the thigh. Once the lower limb has been prepped, it is exsanguinated by elevation. Tightly wrapping the leg or the use of a rubber Esmarch for exsanguination is generally not necessary. The tourniquet is then inflated to 300 mmHg, or adjusted to systolic blood pressure. If the patient has a history of vascular disease, a pneumatic tourniquet is positioned as proximally as possible, but generally not inflated. We consider the use of sterile disposable exsanguinating tourniquets (e.g., HemaClear®) in hemorrhagic procedures where sterility is paramount, such as total knee arthroplasty.
- The surgical leg is prepped with a betadine and alcohol solution. After prepping the foot, it is covered with a size 9 glove. The leg is then elevated and held by the foot while the rest of the limb is prepped. A stocking is then rolled up the leg to the level of the tourniquet, and an arthroscopy drape is used to complete the sterile field.
- The stocking is opened with scissors. The planned surgical incision and any previous surgical scars are marked with a pen. An adhesive drape with or without antiseptic (e.g., Opsite™, Ioban™) is applied, always allowing for the possibility of extending the expected incision proximally or distally (Fig. 1.4).

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P Neyret et al. (eds.), *Surgery of the Knee*, https://doi.org/10.1007/978-3-030-19073-6_1

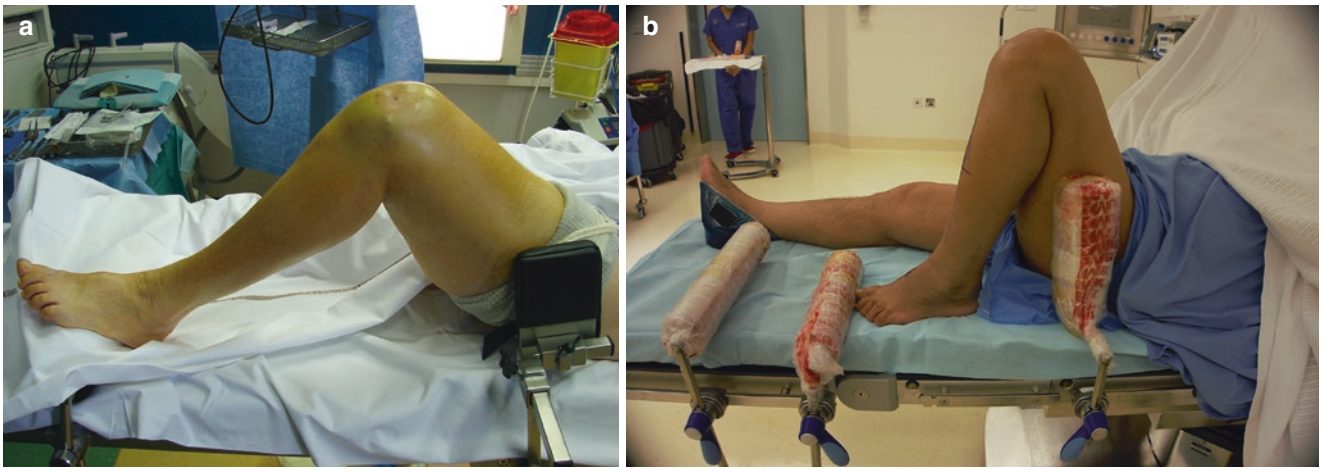

Fig. 1.1 (**a**) The distal horizontal post allows for 90° and 110° of flexion, (**b**) a proximal horizontal post maintains hyperflexion

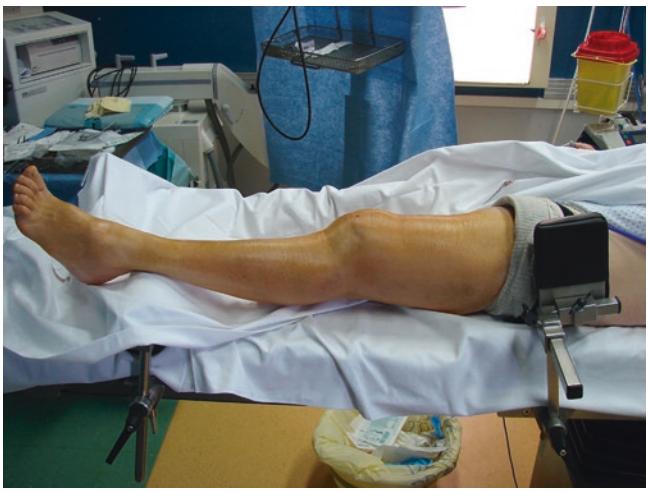

Fig. 1.2 Extension of the knee

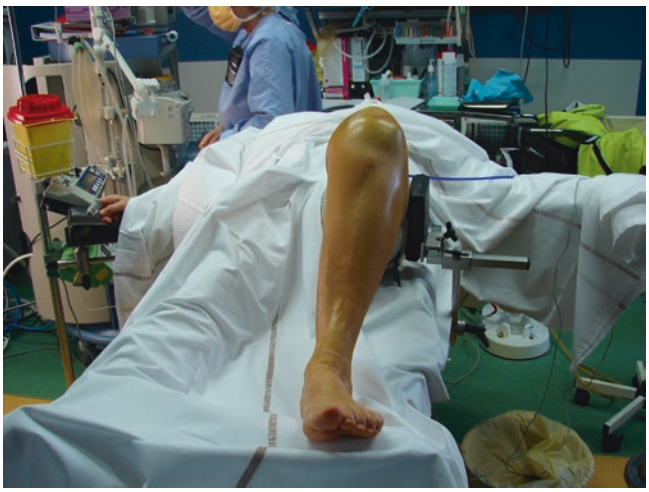

Fig. 1.3 The lateral support controls hip rotation; note the slight external rotation prior to the inflation of a pneumatic tourniquet

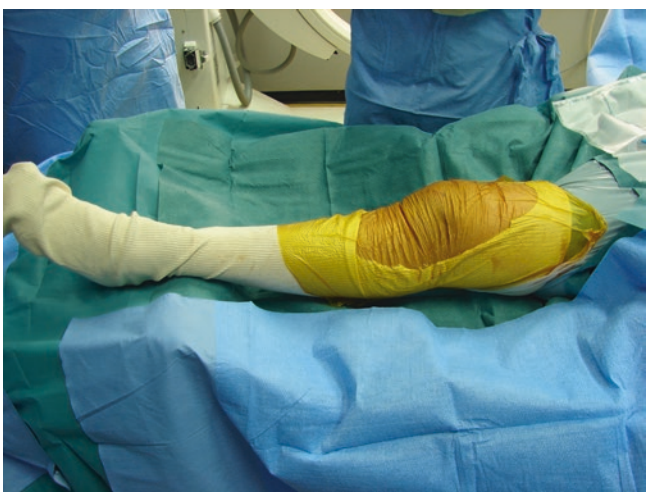

Fig. 1.4 Leg prepped and ready for surgery