



OPTIMAL POSITIONING FOR MRI OF THE DISTAL BICEPS

The FABS protocol for imaging distal biceps tendon ruptures was described by Giuffre and Moss in *AJR:182, April 2004*.

The patient should lie prone. The shoulder was abducted 180°, with the arm beside the head. The elbow was flexed to 90°, with the forearm supinated, thumb up, and a shoulder phased array coil was placed around the elbow. The position is referred as the "FABS view," meaning the flexed elbow with the shoulder abducted and the forearm in supination view.

The authors suggest initially performing a three-plane localizer, with either three or five images in the axial, sagittal, and coronal planes. The coronal localizer images (sagittal elbow anatomy) are used to plan the sequences along the long axis of the distal biceps brachii tendon (along the line of the tendon if it is visible). If the tendon is not clearly seen on the localizer images, the series is planned nearly perpendicular to the radius, which is always clearly seen. The normal flexed abducted supinated view showed the full length of the tendon. Images in axial, and in some cases sagittal, planes are then also obtained with the shoulder in abduction and the elbow extended in the overhead position. It is also possible to obtain the axial and sagittal images with the arm by the side. Series with and without fat suppression are performed (proton density fast spin echo; TR/TE, 3,000/34 or 45) along the axis of the tendon (elbow flexed) and axial to the elbow joint (elbow extended). The field of view should be 15 x 15 cm, with a slice thickness was 3 or 4 mm with interslice spacing of zero. For the flexed abducted supinated view, usually 18 slices are obtained with an approximate examination time of 2 min 40 sec.



Fig. 1. —Photograph shows patient positioning for flexed abducted supinated view: patient is positioned prone on MRI table with elbow in flexed abducted supinated view position. Notice position of arm, flexed at elbow and abducted at shoulder with supinated forearm, thumb up.

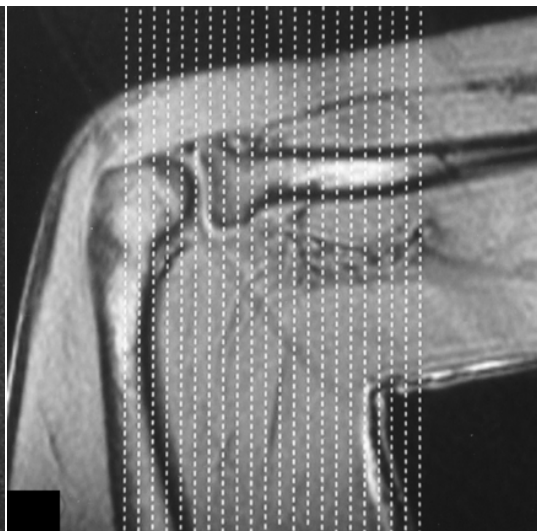


Fig. 2. —Localizer MR image with lines shows slice positioning for flexed abducted supinated view. Notice sections, sagittal to long axis of body but coronal to anatomy at elbow. Ideal angulation is planned along distal biceps brachii tendon, but often, as here, this structure is not clearly visible on localizer images. In this case, sections nearly perpendicular to radius provide reasonable and reproducible imaging plane.

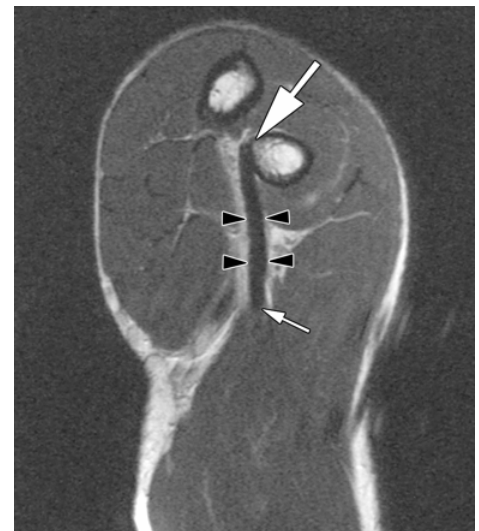


Fig 3. —Proton density-weighted MR image (TR/TE, 3,000/34) of normal flexed abducted supinated view of distal biceps brachii tendon shows straight course of tendon from musculotendinous junction to insertion and homogeneous low signal of tendon. Large arrow = radial tuberosity, arrowheads = distal biceps tendon, small arrow = musculotendinous junction.