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STATIC AND FUNCTIONAL ULTRASO- NOGRAPHIC PICTURE SHOULDER AND ACROMIOCLAVICULAR JOINTS IN NORMAL AND AT HYPERMOBILITY

The research was conducted as part of research work: “Determining the effectiveness of innovative technologies in the prevention, diagnosis and treatment of malignant tumors of the main locations” (state registration 011U008097) and “Medical support of the sports, health improving and recovery trainings” (state registration 0111U001374).

Summary. Studying of anatomy humeral and acromioclavicular joints according to static and functional ultrasonography in norm and at hypermobility was an objective of this research. For the decision of an object in view we had been surveyed 45 persons at the age from 15 till 59 years (middle age has made $32,4 \pm 1,6$ year), from them 32 men and 13 women. To clinical signs of hypermobility an investigated contingent have divided on two groups: the basic – 15 patients and control – 30 patients. It is established that humeral and acromioclavicular joints on ultrasonograms the features have display of elements. In research are described not changed soft tissue and bone structures, and also variants of their normal structure. By means of functional ultrasonography the basic signs of instability humeral and acromioclavicular joints have been defined.

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Fig. 1. Ultrasonography of unaltered right shoulder joint from the anterior approach in the transverse section. Structures visualized: tendon of the long head of m.biceps brachii (arrow-head), tendon of the supraspinatus muscle (arrows), coracoids process (curved arrow).

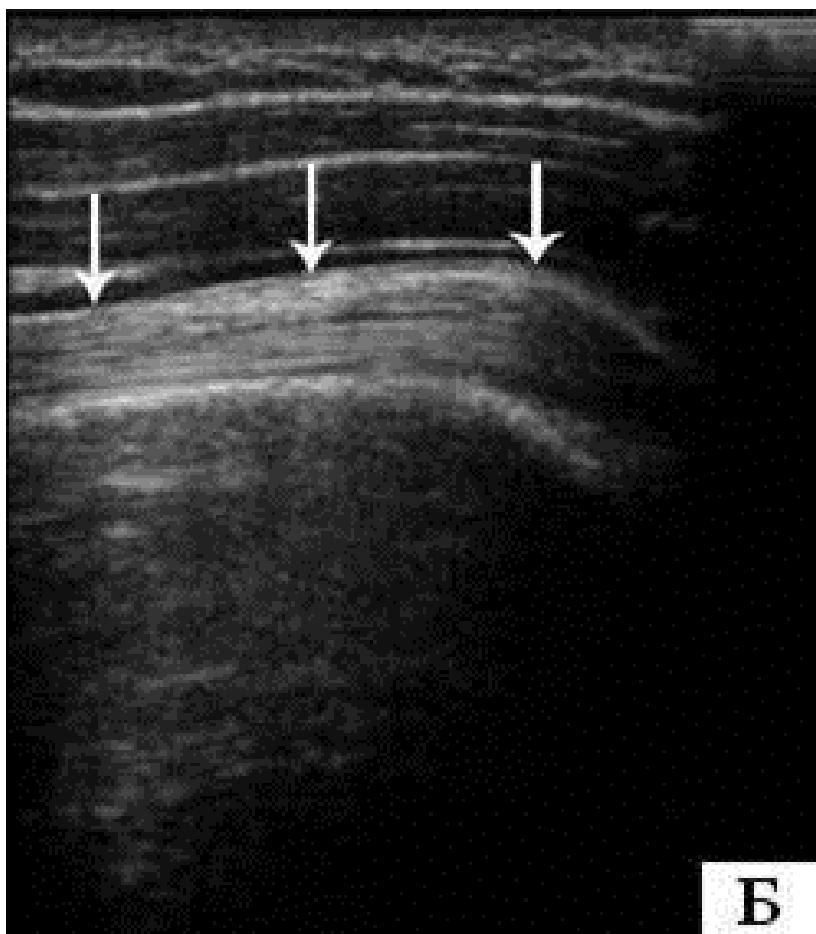
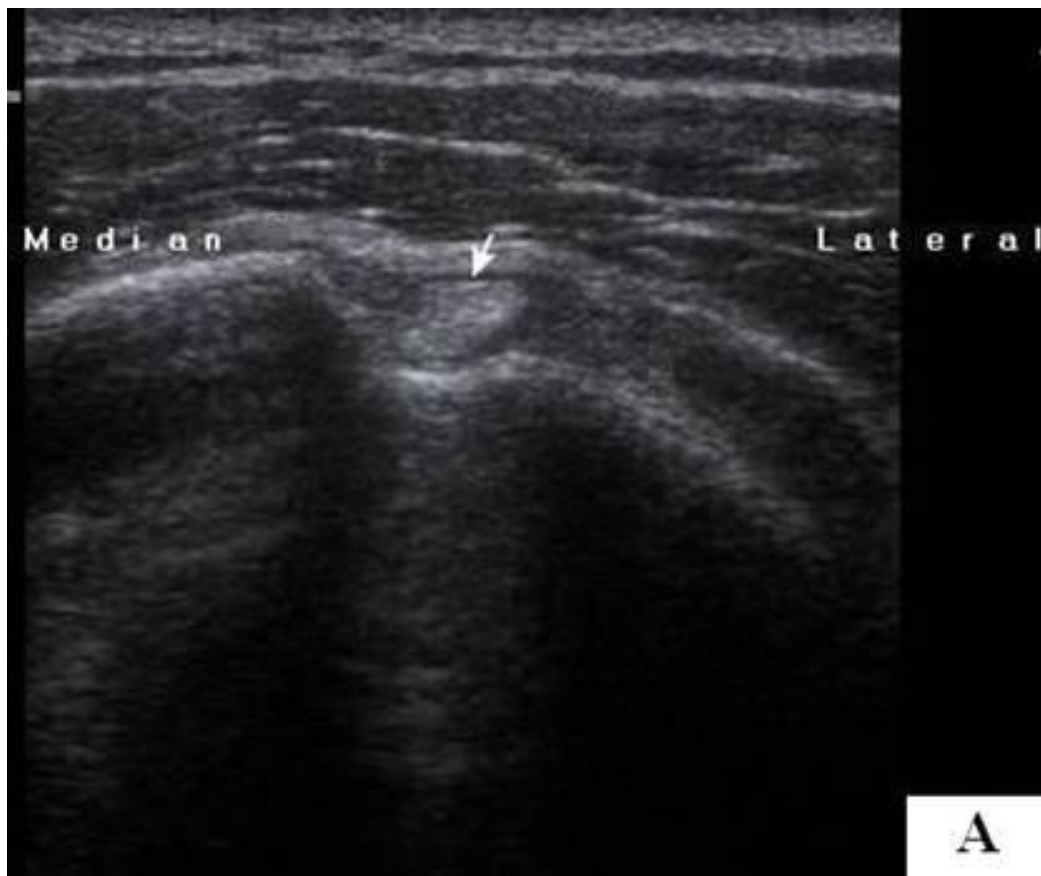


Fig. 2. Ultrasonography of unaltered tendon of the right shoulder long head of m.biceps brachii in the transverse (A) and longitudinal (Б) sections.

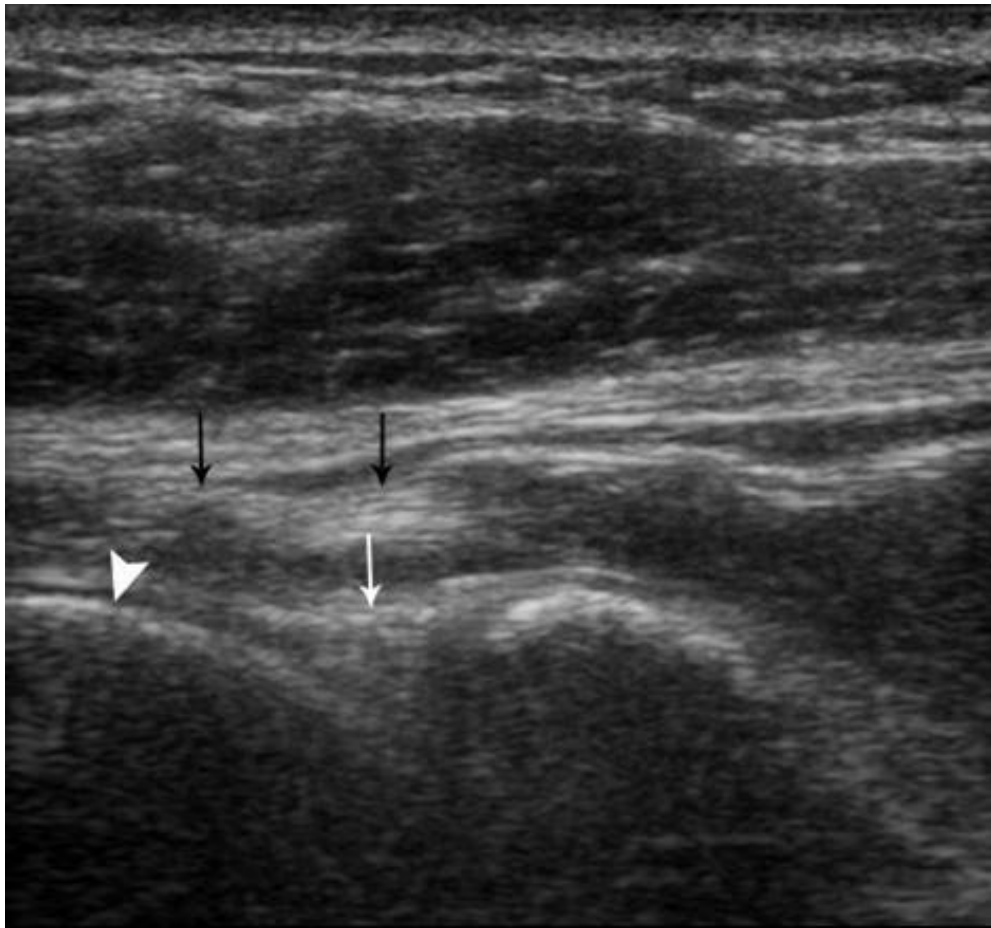


Fig. 3. Ultrasonography of unaltered right shoulder joint from the posterior approach in the transverse section. із заднього доступу в поперечному перетині. Structures visualized: posterior articular labrum (white arrow), head of the humerus (arrowhead), tendon of the infraspinatus muscle (black arrows).

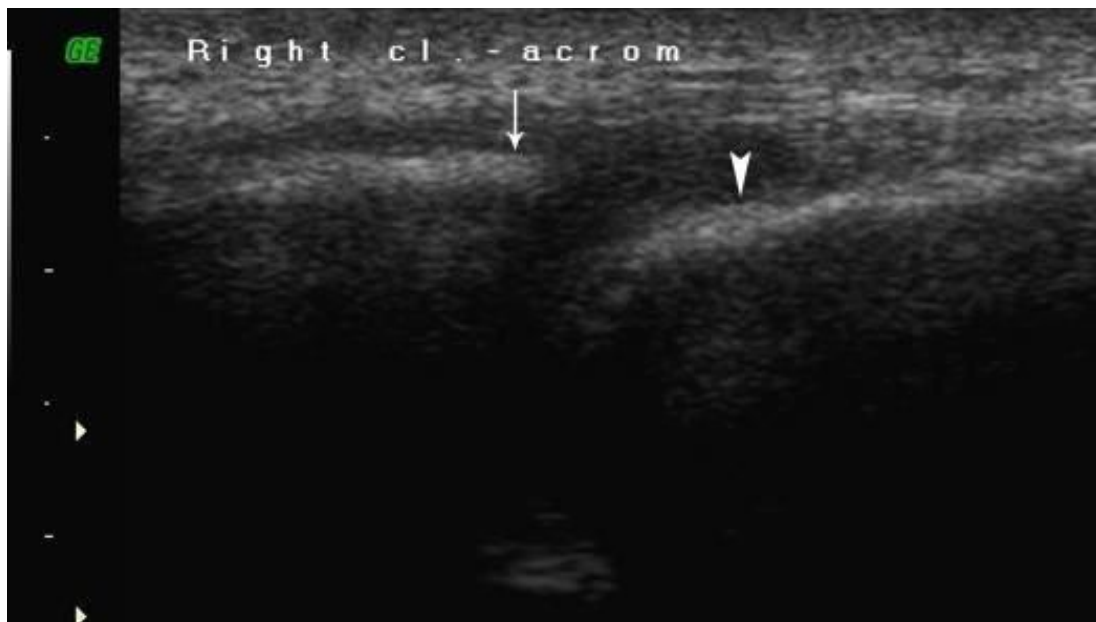


Fig. 4. Ultrasonography of unaltered right acromioclavicular joint in the longitudinal section. The acromion (arrowhead) is positioned lower than the clavicle (arrow) – between them there is the articular slit.

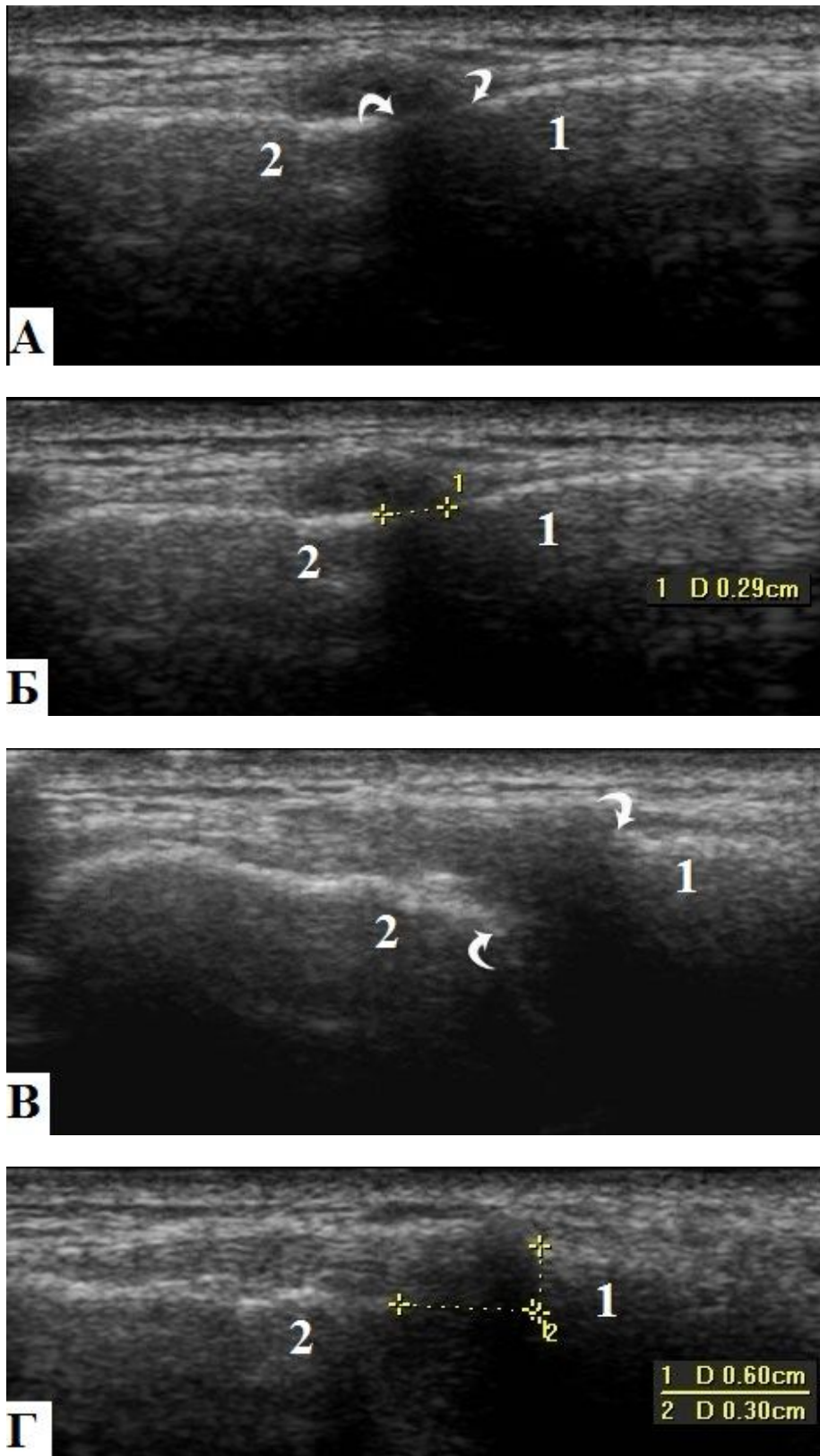


Fig. 5. Functional ultrasonography of the right acromioclavicular joint in the position of adduction-pronation (A, Б) and in free position along the trunk (B, Г) of the female patient G., 23 years, with the diagnosis of Joint hypermobility syndrome. 1 – the clavicle, 2 – the acromion. Significant expansion of the articular slit (curver arrows) and the upward displacement of the clavicle.

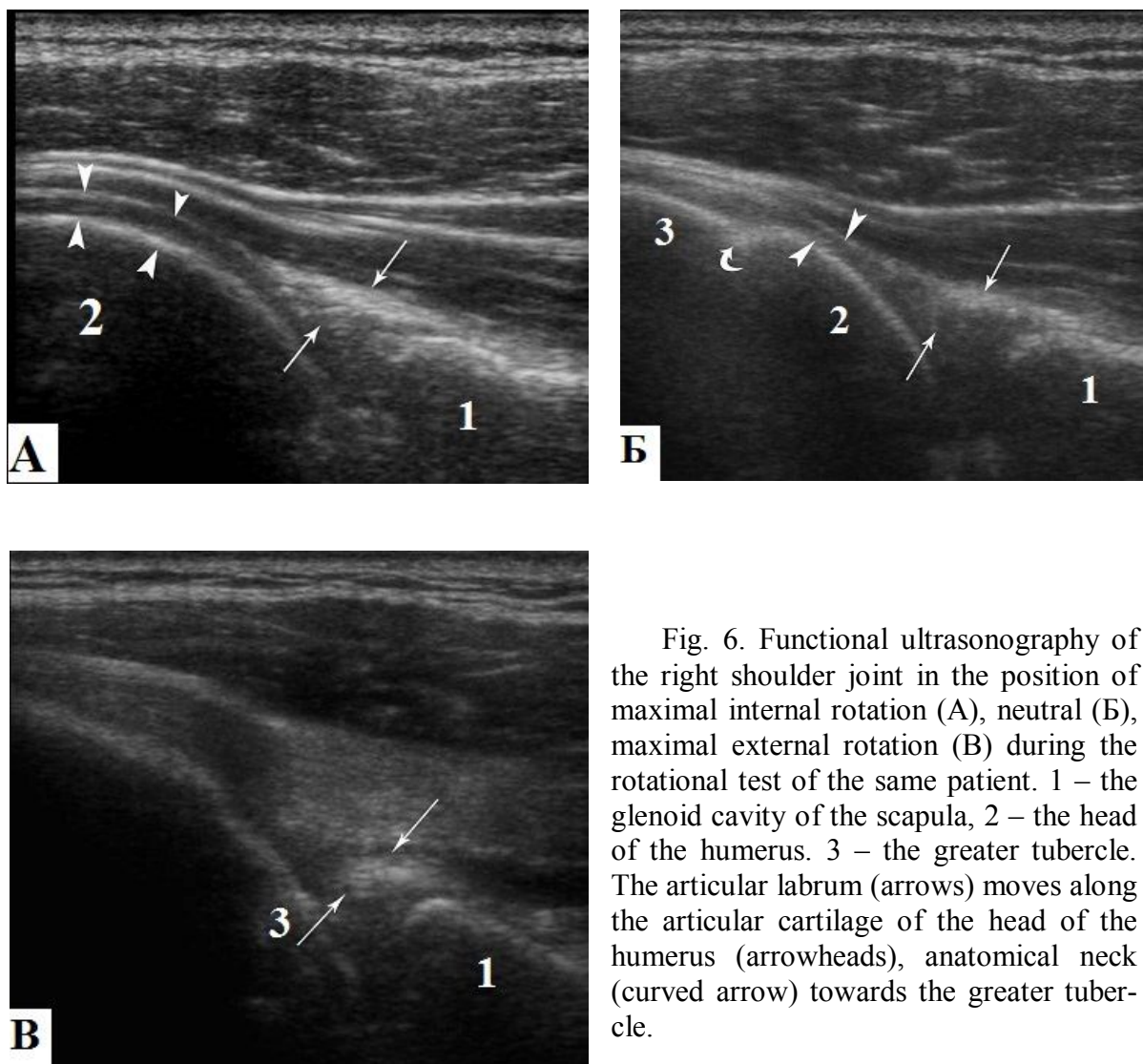


Fig. 6. Functional ultrasonography of the right shoulder joint in the position of maximal internal rotation (A), neutral (B), maximal external rotation (B) during the rotational test of the same patient. 1 – the glenoid cavity of the scapula, 2 – the head of the humerus. 3 – the greater tubercle. The articular labrum (arrows) moves along the articular cartilage of the head of the humerus (arrowheads), anatomical neck (curved arrow) towards the greater tubercle.

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