

Abstract

Fractures of the scapula used to be among rare injuries, but in the last two decades their number has increased.

Fractures of the scapula can be isolated, but in 67-92% they are combined with injuries to other structures of the shoulder girdle.

The dissertation was divided into two parts: experimental and clinical. In the experimental part, the aim was to describe the occurrence and variants of sulcus coracoglenoidalis (CGN) and sulcus arteriae circumflexae scapulae (SCF). These two little-known structures play an important role in the occurrence of some types of scapula fractures and in their surgical treatment.

Combined scapular injuries with AC and SC dislocation are rare. Therefore, in the clinical part, we decided to identify and describe in detail combined injuries of the scapula with AC and SC dislocation, including a detailed description of fractures of coracoid process.

Anatomical studies were performed on 330 dry bone specimens of adult scapulas. Clinical studies were conducted on a set of 519 scapula fractures in adult patients occurring in the period 2002-2020.

In the anatomical part of the dissertation, two anatomical structures were described for the first time: CGN and SCF. Our studies pointed to considerable variability in the occurrence and degree of formation of both of these grooves and drew attention to their clinical significance, especially in fractures of the anatomical neck and body of the scapula.

In patients with fractures of the coracoid process, unlike previous authors, a CT examination was performed, thanks to which we identified a new category, i.e. comminutive fracture of coracoid process, which cannot be diagnosed on a regular X-ray image.

AC dislocation most often occurs in coracoid process fractures, acromion or lateral spina or upper glenoid. It was not recorded in fractures of the neck of the scapula. AC dislocation associated with scapular fractures can lead to bone or ligament instability. Rarely, lesions can be combined. Our study is the only one that describes in more detail the set of scapular fractures combined with AC dislocation.

SC dislocation associated with scapular fracture is rare. In our series, we recorded only 2 cases of SC dislocation that were associated with acromion fracture and scapular body fracture. At the same time, they are the only two cases in the literature with complete CT documentation.