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THE SUBCLAVIAN ARTERY AND ITS BRANCHES IN THE GROUND SQUIRREL (*Citellus citellus*)

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The subclavian artery (a. subclavia) is the intrathoracic portion of the parent vessel to each thoracic limb in the ground squirrel. It arises on the left side from the arch of the aorta (a. subclavia sinistra) and on the right side subclavia dextra) as a terminal branch of the innominate artery (a. anonyma) not far from the thoracic inlet. Before they leave the thoracic cavity and continue as the axillary arteries (a. axillaris) each subclavian artery forms the following branches: The internal thoracic artery (a. thoracica interna) with its branches (a. musculophrenica, a. epigastrica cranialis, ramus intercostalis and ramus sternalis) supplies the diaphragm, the last eight intercostal muscles, the abdominal and intercostal muscles and the thoracic mammary gland with blood.

The supreme intercostal artery (a. intercostalis suprema) with its branches (a. intercostalis I, II, III and IV and truncus broncho-esophagicus of the right supreme intercostal artery) supplies the first four intercostal muscles, esophagus, lung and mediastinum.

The vertebral artery (a. vertebralis) is the main vessel which supplies the brain. Its branches (rami spinales, a basilaris, a. ethmoidea interna, a. cerebelli nasalis, a. cerebri profunda, a. cerebri media and a. corporis callosi) supply the spinal cord, medulla oblongata, pons, cerebellum, caudal colliculi, mucous membrane of the nasal cavity, mesencephalon, diencephalon, cerebral hemispheres and corpus callosum and hemisphere.

The omocervical trunk (truncus omocervicalis) is a strong vessel, which with its branches (ramus descendens, a. cervicalis ascendens, a. transversa scapulae and cervicalis superficialis) supplies the deep ventral cervical muscles with associated brown fat tissue and lymphonodes as well as the subscapular and supraspinatus muscles.

The transverse colli artery (a. transversa colli) branches into the extrinsic muscle of the shoulder. The deep cervical artery (a. cervicalis profunda) conveys blood to the dorsal cervical muscles.

The axillary artery (a. axillaris) is a continuation of the subclavian artery. Its branches (a. thoracoacromialis, a. thoracica externa, a. profunda brachii) supply the lateral and medial shoulder muscles and dorsal antebrachium muscles.

The brachial artery (a. brachialis) is a continuation of the axillary artery. Its branches (rami musculares, a. bicipitalis, a. collateralis ulnaris, a. nutritia humeri, a. collateralis radialis proximalis and a. collateralis radialis distalis) conveys blood to the triceps and biceps muscles, humerus and flexor muscle of the antebrachium.

The median artery (a. mediana) is a continuation of the brachial artery. Its branches (rami musculares, a. interossea communis, a. radialis and a. ulnaris) supply the flexor and extensor digit muscles.

Key words: axillary artery, brachial artery, ground squirrel, median artery, subclavian artery.

INTRODUCTION

The ground squirrel (*Citellus citellus*) is a rodent ,very active through most of the day except during the hours of most intensive sunlight. In Serbia and Macedonia it is one of the most troublesome pests to homeowners and gardeners Throughout the colder areas of their range, ground squirrels hibernate during the winter months, descreasing the normal body temperature and metabolic rate to very low levels. During this time they stay within their burrows, seldom venturing out (Blanton, 1996). Altered body temperature during hibernation was described Hut *et al*., (2001) and Strijkstra, (1999) as well as changed responsiveness of aortic tissue and persistent circadian rhythmicity in the hibernating ground squirrel (Deelman *et al*., 1998). The effects of TSH-releasing hormone on neurons of the brain in were studied in hibernating and active ground squirrel (Belousov and Belousova, 1993), while brown adipose tissue has been widely investigated (Murakami *et al*., 2001; Konishi *et al*., 2000; Kochan *et al*., 1999; Cinti *et al*., 1997).

The arterial system of experimental animals has been studied by many authors. This includes the circulatory system of the rat (Hebel and Stromberg, 1976), the morphology and arteries of the heart in the molle rat (Blagojevic *et al*., 1995; Blagojević, 1981), the portal system in the molle rat (Blagojević and Nikolić, 1989) and ground squirrel, (Nikolić *et al*. 2003), the circulatory system in the golden hamster (Lelievre, 1963) and morphology of the femoral artery in the pregnant guinea-pig (Jovanović *et al*., 1999) As part of a continual study on the morphology and topography of the cardiovascular system in the ground squirrel, the morphology and topography of the subclavian artery and its branches are described here. Our results correspond with the pattern of this artery in other experimental animals such as the rat (*Rattus norvegicus*), molle rat (*Spalax leucodon*) and golden hamster (*Mesocricetus auratus*).

MATERIALS AND METHODS

The investigations was perfomed on 20 adult ground squirrels, of both sexes. After bleeding out, various contrast agents were injected into the aorta. The most often used contrast medium was gelatin stained with painting tempera,

micropack-barium. For roentgenograms minium and gelatin were used or minium in linseed oil.

RESULTS AND DISCUSSION

The subclavian artery (*A. subclavia*, figure $1_{5,6}$, 2_1) is the intrathoracic portion of the parent vessel to each thoracic limb. The right subclavian artery (figure 1_5) is 2 to 3 mm in arises from the innominate artery (*a. anonyma* figure 1_3) at the level of the first rib in the ground squirrel similarly to the rat (Hebel and Stromberg, 1976). In the molle rat (Blagojević, 1981) and golden hamster (Lelievre, 1963) this artery arises from the brachiocephalicus trunk It arises on the left side (*a. subclavia sinistra* figure 1_6,2_1) from the arch of the aorta in the ground squirrel, rat (Hebel and Stromberg, 1976), molle rat (Blagojević 1981) and golden hamster (Lelievre, 1963). Branches of the subclavian artery vascularize the thoracic limb, cranial part of the thorax and a part of the neck.

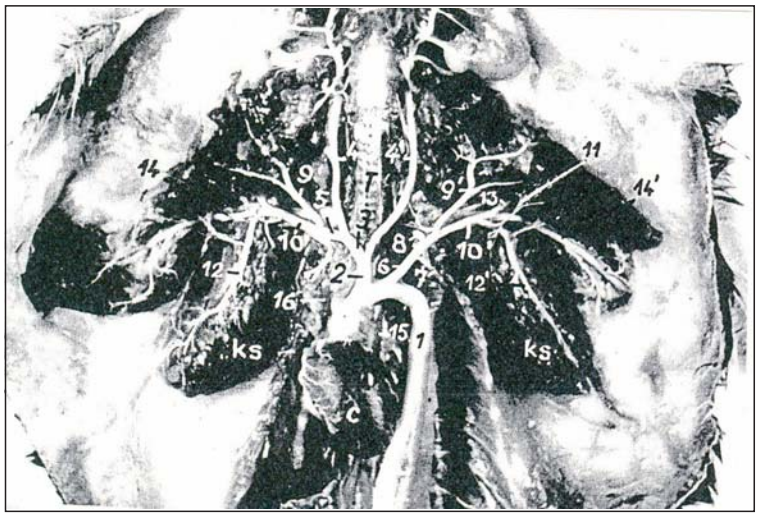


Figure 1. Topographical position of the ventral wall of the aorta and its branches in the ground squirrel

1-aorta, 2-a. brachiocephalica, 3- a. anonyma, 4- a. carotis communis dextra, 4^1- a. carotis communis sinistra, 5- a. subclavia dextra, 6- a. subclavia sinistra, 7- a. thoracica interna, 8- a. vertebralis, 9- truncus omocervicalis dexter, 9^1- truncus omocervicalis sinister, 10- a. axillaris dextra, 10^1- a. axillaris sinistra, 11- a. thoracoacromialis sinistra, 12- a. thoracica externa dextra, 12^1- a. thoracica externa sinistra, 13- a. profunda brachii sinistra, 14- a. brachialis dextra, 14^1- a. brachialis sinistra, 15- v. cava cranialis sinistra, 16- v. cava cranialis dextra, C- cor, T- trachea, Ks- brown fat tissue

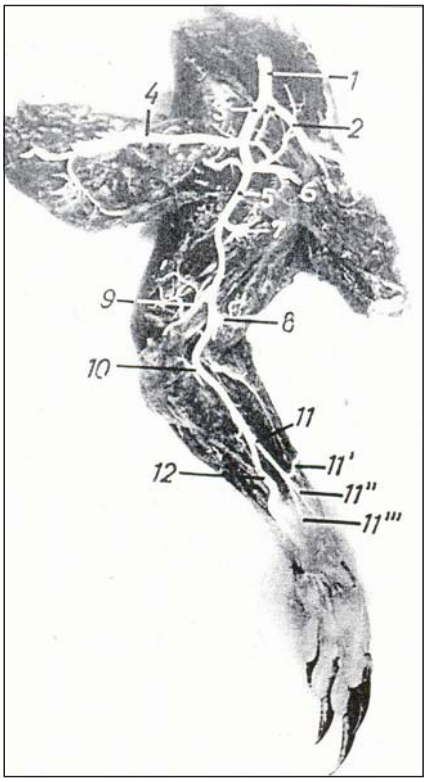
Since the six arteries which arise from each subclavian artery have similar origins and distributions only a single description of them will be given. The six arteries are as follows:

In the ground squirrel, rat (Hebel and Stromberg, 1976) and golden hamster (Lelievre, 1963) the internal thoracic artery (*a. thoracica interna*, figure 1_7) is the first branch of the subclavian artery but in the molle rat (Blagojević, 1981) it the second branch of the costocervical trunk. It runs along the internal side of the caudal end of the sternum and continues caudally covered by thin transversus thoracic muscle. Along its course it gives off the following branches: musculophrenic, cranial epigastric, intercostal and sternal.

The musculophrenic artery (*a. musculophrenica*) arises from the internal thoracic artery at the level of the sixth intercostal space. Numerous small branches leave the musculophrenic to supply the muscular periphery of the diaphragm. Fewer branches supply the adjacent abdominal wall.

The cranial epigastric artery (*a. epigastrica cranialis*) arises from the internal thoracic artery when it passes between the transverse and the internal oblique abdominal muscles. Its branches enter the abdominal muscles and thoracic mammary glands.

The intercostal branch (*ramus intercostalis*) sends small twigs to supply the intercostal muscles. Some of these twigs anastomose with the intercostal arteries which come from the thoracic aorta.



The sternal branch (*ramus sternalis*) ramifies into the pectoral muscles and respective skin and mammary glands. Some of these branches run toward the precardial mediastinal spaces ending in the precardial brown fat tissue.

The supreme intercostal artery (*a. intercostalis suprema*) is a thin branch of the subclavian artery in the ground squirrel, but a thin branch of the costocervical trunk in the molle rat (Blagojević, 1981) and golden hamster (Lelievre, 1963). It extends along the lateral surface of the longus colli muscle.

Figure 2. Arteries of the left thoracic limb in the ground squirrel. Medial aspect.

a. subclavia, 2- truncus omocervicalis, 3- a. axillaris, 4- a. thoracica externa, 5- a. brachialis, 6- a. profunda brachii, 7- a. bicipitalis, 8- a. collateralis radialis, 9- a. collateralis ulnaris, 10- a. mediana, 11- a. radialis, 11'- ramus anastomoticus, 11''- ramus dorsalis a. radialis, 11'''- ramus palmaris a. radialis, 12- a. ulnaris

After crossing the sympathicus nerve the left supreme intercostal artery gives off the first four intercostal arteries (*a. intercostalis* I, II, III and IV) at the level of the respective intercostal space bringing arterial blood to the adjacent intercostal muscles. From the right supreme intercostal artery arise four intercostal arteries and a short bronchoesophageal trunk (*truncus bronchoesophagicus*) for the esophageal and bronchal artery. The esophageal artery sends many branches which enter the dorsal and ventral wall of the thoracic portion of the esophagus. The bronchal artery follows the right bronchus ramifying into the lung and mediastinum.

The vertebral artery (*a. vertebralis*, figure 1_8) is the largest source of blood to the brain of the ground squirrel. However, the arterial blood of the molle rat (Blagojević, 1981) and golden hamster (Lelievre, 1963) is brought to the brain by the vertebral and internal carotid arteries. The vertebral artery leaves the cranial thoracic inlet and it ascends to the transverse foramen of the sixth cervical vertebra, entering the transverse canal of the cervical vertebral column. Before entering the transverse canal at the six cervical vertebra the vertebral artery, sends dorsal and ventral muscular branches into the adjacent cervical muscles. When the vertebral artery separates into the first seven cervical spinal branches (*rami spinales*), which enter the spinal canal, it continue running through the foramen magnum into the cranium As in the rat (Hebel and Stromberg, 1976), molle rat (Blagojević, 1981) and golden hamster (Lelievre, 1963), in the ground squirrel, also, the left and right vertebral artery fuse to form the basilar artery (*a. basilaris*) at the level of the decussation of the pyramids. This artery runs along the ventral surface of the brain stem and is the largest source of blood to the brain. The basilar artery divides into a large and two smaller branches at the level of the pons.

The nasal cerebelli artery (*a. cerebelli nasalis*) is a large branch of the basilar artery. It runs along the lateral side of the cerebral peduncle then turns dorsally, ramifying into the cerebellum and the caudal colliculi of the quadrigemina plate.

The dexter and sinister oral branches (*ramus oralis dexter* and *ramus oralis sinister*) are two smaller branches of the basilar artery. Both branches first run laterally of the basilar artery and then turn orally lying between the corresponding piriform area and the pituitary gland. Each oral branch at the level of the pituitary gland sends branches to form anastomoses with the internal carotid artery. Both oral branches continue running along the ventral surface of the optic nerves and approach one other before the optic chiasm. Each oral branch continues along the ventral surface of the corresponding olfactory bulb towards the cribriform plate terminating in the mucous membrane of the nasal cavity as the sinister and dexter internal ethmoidal artery. The deep and medial cerebral artery and also the artery of the *corpus callosum* leave each of the oral branches before both oral branches enter the nasal cavity.

The deep cerebral artery (*a. cerebri profunda*) runs along the ventral surface of the cerebral peduncle and ramifies into the mesencephalon, diencephalon and cerebral hemisphere. It also sends a few small twigs to supply the choroid plexus.

The medial cerebral artery (*a. cerebri media*) runs along the lateral fissure ramifying into the cerebral hemispheres.

The artery of the *corpus callosum* (*a. corporis callosi*) extends along the longitudinal fissure towards the *corpus callosum*, ramifying in it.

The omocervical trunk (*Truncus omocervicalis*, figure $1_{9,9'}$, 2_2) leaves the thorax between the first rib, clavicle and manubrium of sternum and turns latero-cranially toward the external jugular vein and accompanied with it lies between the brachiocephalicus and serratus ventralis muscles. The omocervical trunk is a common trunk for the following branches:

The descending branch (*ramus descendens*) ramifies in the adjacent cervical muscles (*m. cleidobrachialis* and *mm. pectorales superficiales*).

The ascending cervical artery (*a. cervicalis ascendens*) ramifies in the ventral muscles of the neck (*m. sternohyoideus, m. sternothyroideus*) , but also sends a few twigs to the cervical lymph nodes and cervical brown fat tissue.

The transverse scapular artery (*a. transversa scapulae*) supplies the subscapular and supraspiantus muscles and brown fat tissue of that region also.

The superficial cervical artery (*a. cervicalis superficialis*) supplies the cervical muscles and sends more twigs to the parotid gland and brown fat tissue.

The transverse colli artery (*a. transversa colli*) arises from the lateral wall of the subclavian artery supplying the dorsal muscles of the neck mainly serratus ventralis, trapezius and latissimus dorsi.

The deep cervical artery (*a. cervicalis profunda*) arises from the subclavian artery in the ground squirrel , but from the costocervical trunk in the rat (Hebel and Stromberg, 1976) and molle rat (Blagojević, 1981).

Similarly to the other experimental animals the axillary artery (*a. axillaris*, figure $1_{10,10'}$, 2_3) in the ground squirrel is a continuation of the subclavian artery. It lies ventrally to the brachial plexus and subclavian vein. From the axillary artery arise the thoracoacromial, externa thoracic and deep brachial arteries which with their branches mainly supply the scapular muscles.

The thoracoacromial artery (*a. thoracoacromialis*, figure 1_{11}) runs cranioventrally to the pectoral muscles branching in them.

The externa thoracic artery (*a. thoracica externa*, figure $1_{12,12'}$, 2_4) arises laterally to the first rib and runs through the axillary brown fat tissue, which it supplies. Its larger branches supply the deep pectoral, *teres major* and *latissimus dorsi* muscles. In the rat. these muscles (Hebel and Stromberg, 1976) are vascularised by the lateral thoracic artery. It also sends branches to the thoracic mammary glands.

The deep brachial atery (*a. profunda brachii*, figure 1_{13}, 2_6) is the last branch of the axillary artery, while in the rat (Hebel and Stromberg, 1976), molle rat (Blagojević, 1981) and golden hamster (Lelievre, 1963) it is a branch of the brachial artery. It lies on the medial surface of the proximal thoracic limb. At its begining the deep brachial artery separates a short common trunk for the *subscapular, thoracodorsal, cranial circumflex humeral, circumflex scapular* and *caudal circumflex* humeral arteries.

The subscapular artery (*a. subscapularis*) is a thin vessel which branches into the subscapularis muscle.

The thoracodorsal artery (*a. thoracodorsalis*) runs along the medial surface of the teres major and latissimus dorsi muscles in which it ramifies. In its course it

sends a few twigs to supply axillary brown fat tissue. The thoracodorsal artery is usually the branch of the deep brachial artery in the ground squirrel but it may be a branch of the axillary or external thoracic artery. The thoracodorsalis artery is a terminal vessel of the subscapular artery in the rat (Hebel and Stromberg, 1976) and a branch of the axillary in the molle rat (Blagojević, 1981).

The cranial circumflex humeral artery (*a. circumflexa humeri cranialis*) runs to the medial surface of the humerus passing between the biceps and the coracobrachial muscles to which it sends many branches.

The circumflex scapular artery (*a. circumflexa scapulae*) lies on the medial surface of the scapula between the subscapular and teres major muscles . It turns to the lateral surface of the scapula giving branches to the supraspinatus and deltoid muscles. This artery is a branch of the subscapular artery in the rat (Hebel and Stromberg, 1976)

The caudal circumflex humeral artery (*a. circumflexa humeri caudalis*) passes between the lateral and long head of the triceps muscle, then it continues caudally to the shoulder joint and laterally to the humerus. It sends small branches to the triceps, teres major and deltoid muscles and to the shoulder joint also. The caudal circumflex humeral artery is a branch of the axillary in the rat (Hebel and Stromberg, 1976) and molle rat (Blagojević 1981).

The deep brachial artery, after giving off a common trunk for the arteries mentioned, turns to the lateral side of the proximal thoracic limb between the triceps, latissimus dorsi and deltoid muscles. Its small and larger branches supply the *triceps, deltoid* and *infraspinatus* muscles. One of the larger branches of the deep brachial artery is the superficial radial artery (*a. radialis superficialis*). It runs along the dorsal aspect of the thoracic limb to the carpus where its branches form the superficial dorsal metacarpal artery III and IV (*a. metacrapea dorsalis superficialis* III and IV). These arteries anastomose with the deep dorsal metacarpal arteries (*a. metacarpea dorsalis profunda* III and IV). Thus, the superficial radial artery arises from the deep brachial artery in the ground squirrel but from the brachial artery in the rat (Hebel and Stromberg, 1976) and molle rat (Blagojević, 1981).

The brachial artery (*a. brachialis*, figure $1_{14,14'}$, 2_5) is a continuation of the axillary artery in the ground squirrel, molle rat (Blagojević, 1981) and golden hamster (Lelievre, 1963). The brachial artery in the brachium lies besides the median nerve and brachial vein. Along its course it gives off: the muscular branches, *bicipitalis, collateralis ulnaris, nutritia humery* and *proximal* and *distal collateralis radialis* arteries.

The muscular branches (*rami musculares*) are small twigs which supply the triceps and tensor fasciae antebrachii muscles.

The bicipital artery (*a. bicipitalis*, figure 2_7) ramifies into the biceps and brachial muscles.

The collateral ulnar artery (*a. collateralis ulnaris*, figure 2_9) is a thin vessel which arises from the brachial artery proximal to the elbow joint. It continues distally where it is divided into a short and a larger branch. The short branch of the collateral ulnar artery runs proximocaudally to the medial surface of the antebrachium. The long branch of the collateral ulnar artery runs distally to the

caudal side of the antebrachium and arborises in the muscles of that region (*regio antebrachii caudalis*). This branch also sends a few twigs to the elbow joint.

The nutrient artery of the humerus (a. nutritia humeri) enters the humerus through the *nutritia foramina* ramifying in it.

The proximal collateral radial artery (*a. collateralis radialis proximalis*, figure 2_8) turns cranially toward the biceps, extensor carpi radialis and extensor digitalis communis muscles, branching in them.

The distal collateral radial artery (*a. collateralis radialis distalis*) is the last branch of the brachial artery. It arises from the medial wall of the brachial artery and makes a sweeping curve to the lateral surface of the humerus. The superficial and deep branches are the terminal branches of the distal collateral radial artery. The superficial branch passes under the skin along the superficial surface of the *extensor digitalis communis* muscle sending branches which supply this muscle. The deep branch of the distal collateral radial artery on reaching the extensor carpi radialis gives many twigs to this muscle.

The median artery (a mediana, figure 2_{10}) is a continuation of the brachial artery in the ground squirrel and molle rat (Blagojević, 1981). It extends from the medial side of the elbow joint to its terminal radial and ulnar artery. It is accompanied by the median nerve and small satellite vein. In it course the median artery gives off the muscular branches, the common interosseous, radial and ulnar arteries.

The muscular branches of the median artery (*rami musculares*) are represented by twigs which enter the digital flexor muscles.

The common interosseous artery (*a. interossea communis*) is the second branch of the median artery in the ground squirrel, but a branch of the ulnar artery in the rat (Hebel and Stromberg,1976) and a branch of the brachial artery in the golden hamster (Lelievre, 1963). It is a short vessel and after a course of about two to three milimeters it terminates with the dorsal and palmar artery.

The dorsal interosseous artery (*a. interossea dorsalis*) divides into lateral and medial branches. The lateral branch of the dorsal interosseous artery branches into the deep dorsal metacarpal IV and V arteries at the level of the carpal joint supplying the dorsal metacarpal region. The medial branch of the dorsal interosseous artery gives branches to the region from the first to the fourth metacarpal bones (*a. metacarpea dorsalis profundus* I, II, III and IV). Both branches of the *dorsal interosseous* artery lie between the corresponding metacarpal bones and anastomose with each other.

The palmar interosseous artery (*a. interossea palmaris*) passes through the interosseal space of the antebrachium to the lateropalmar side of the antebrachium and goes distocaudally to the digital flexor muscles branching into more thin twigs which supply these muscles. Then the palmar interosseous artery continues distally to the carpus and, at the level of the distal third of the antebrachium divides into the dorsal and superficial branches. Both branches ramify into the bone and skin of the fifth digit.

The radial artery (*a. radialis*, figure 2_{11}) is a thinner terminal branch of the median artery. It runs toward the carpal joint, under the skin between the

radius and extensor carpi radialis muscle. At the carpus it divides into the dorsal, palmar and anastomose branches.

The dorsal branch of the radial artery (*ramus dorsalis*, figure 2_{11}") runs towards the first digit and when it passes under the adductor pollicis longus muscle rises to the dorsal surface of the first metacarpal bone as the deep dorsal metacarpal I and II arteries extending between the first and second digits. The superficial dorsal metacarpal artery I and II which follow the deep dorsal metacarpal artery between the first and second digit, also arise from the dorsal branch of the radial artery.

The palmar branch of the radial artery (*ramus palmaris*, 2_{11}'") runs distally to the palmar side of the carpus and anastomoses with the ulnar artery. The palmar branch of the radial artery can also continue to the foot pad of the fifth digit ramifying in it.

The anastomose branch of the radial artery (*ramus anastomoticus*, figure 2_{11}') anastomose with the superficial radial artery. Occasionally the anastomose branch rises from the dorsal branch of the radial artery instead of from the radial.

The ulnar artery (*a. ulnaris*, figure 2_{12}) is a larger terminal branch of the median artery. It runs under the skin towards the palmar side of the carpus and turns on the palmar side of the metacarpal bones terminating in the four palmar metacarpal arteries. These arteries extend along the palmar side of the intermetacarpal spaces to the skin located between the digits. From that place each of the four palmar metacarpal arteries divides into the lateral and medial palmar digital artery. These arteries form the arch from which comes a thin twig which enters the corresponding claw.

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ARTERIJA SUBCLAVIA I NJENE GRANE U TEKUNICE (*Citellus citellus*)

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SADRŽAJ

A. subclavia je glavni krvni sud koji dovodi krv u prednji ekstremitet tekunice. Ona izbija sa leve strane (*a. subclavia sinistra*) iz luka aorte a sa desne strane (a*. subclavia dextra*) kao završna grana od *a.anonyma*, nedaleko od *apertura thoracis cranialis*. *A. subclavia sinistra* i *a. subclavia dextra* pre nego što napuste grudnu duplju i nastave kao *a. axillaris sinistra* i *a. axillaris dextra* formiraju sledeće grane:

A. thoracica interna sa svojim granama (*a. musculophrenica, a. epigastrica cranialis, ramus intercostalis* i *ramus sternalis*) dovode krv u dijafragmu, poslednjih osam međurebarnih mišića, trbušne mišiće i grudne mlečne žlezde. *A intercostalis suprema* sa svojim granama (*a. intercostalis I, II, III* i *IV* i *truncus bronchoesophagicus* od *a. intercostalis suprema dextra*) snabdeva krvlju prva četiri interkostalna mišića, jednjak, pluća i medijastinum.

A. *vertebralis* je glavni krvni sud koji dovodi krv u mozak. Njene grane (*rami spinales, a basilaris, a. ethmoidea interna, a. cerebelli nasalis, a. cerebri profunda, a. cerebri media* i *a. corporis callosi*) snabdevaju krvlju kičmenu moždinu, produženu moždinu, moždani most, zadnje kolikule, sluznicu nosne šupljine, sredni mozak, međumozak, moždane hemisfere i žuljevito telo.

Truncus omocervicalis je jak krvni sud koji sa svojim granama (*ramus descendens, a. cervicalis ascendens, a. transversa scapulae* i *a. cervicalis superficialis*) snabdeva krvlju mišiće dubokog sloja vrata sa pripadajućim limfnim čvorovima i mrkim masnim tkivom kao i *m. subscapularis* i *m. infraspinatus*.

A. transversa colli razgranava se u površne mišiće vrata.

A. cervicalis profunda dovodi krv u mišiće na dorzalnoj strani vrata.

A. axillaris je nastavak od *a. subclavia*. Njene grane (*a. thoracoacromialis, a. thoracica externa, a. profunda brachii*) dovode krv u mišiće na lateralnoj i medijalnoj strani lopatice i mišiće na dorzalnoj strani podlakane regije.

A. brachialis je nastavak od *a. axillaris*. Njene grane (*rami musculares, a. bicipitalis, a. collateralis ulnaris, a. nutritia humeri, a. collateralis radialis proximalis* i *a. collateralis radialis distalis*) dovode krv u *m. triceps brachii, m. biceps brachii* i mišiće fleksore podlakatne regije.

A. mediana je nastavak od brahijalne arterije. Njene grane (*rami musculares, a. interossea communis, a. radialis* i *a. ulnaris*) dovode krv u fleksore i ekstenzore prstiju.