

## **Western European Journal of Medicine and Medical Science**

Volume 2, Issue 5, May, 2024 https://westerneuropeanstudies.com/index.php/3

ISSN (E): 2942-1918 Open Access | Peer Reviewed

This article/work is licensed under CC Attribution-Non-Commercial 4.0

# LINEAR DIMENSIONS AND ABSOLUTE WEIGHTS OF THE SHOULDER BONE IN THE POSTNATAL ONTOGENESIS OF KORAKOL AND DOMESTIC SHEEP

Associate professor Gayrat Eshmatov, Student Suhrob Aminov, Kakhramon Najmiddinov

Samarkand State University of Veterinary Medicine, Livestock and Biotechnology

**ANNOTATION.** In this paper, the linear dimensions and absolute weights of the stylopodium bones of sheep of different breeds show specific characteristics according to their location in the leg skeleton, with high or low weight and sway. is noted to be related. The absolute values of linear dimensions and weights of stylopodial bones of sheep, regardless of breed, increase rapidly until the first 3 months of postnatal development, reaching the peak of physiological adulthood, i.e. at 18 months of age, and At the 36th and 48th months, they were slightly reduced compared to the 18th month.

**KEY WORDS.** Karakol sheep, Domestic sheep, morphofunctional properties, stylopodium, reduction, absolute index, coefficient, postnatal development.

**Enter.** Sheep breeding, which is one of the important branches of animal husbandry aimed at meeting the needs of the population, has its place in the national economy, especially for farmers and farms, as well as a source of food for the population and the production of agricultural raw materials. is considered The quality and quantity of the products obtained from them are largely influenced by the breed and age of the animals, the natural conditions under which they are kept. Therefore, in the rational use of agricultural animals, it is important to take into account their biological characteristics and the natural ecological environment in which they live.

According to Ye.Ye.Antipina (1999), in addition to the traditional method of determining the age of animals based on teeth, qualitative indicators of skeletal bones can also be used. Independent readings of different parts of the skeleton can give some real information about the age structure of a particular species. The author emphasizes that the quantitative evaluation of morphological and pathological changes in the bone is of great importance in the use of the animal and in the reconstruction of ecological living conditions.

Ye.S.Durtkarinov (2004) studied the morphofunctional properties of the compact substance of the diaphyseal part of the femur of animals with different types of movement, and it was determined that the weight of the supporting force falls on different areas of the compact substance. That is, in sheep belonging to the group of walkers in the phalanx, it is noted that the weight of the supporting force falls more on the caudal area of the compact substance of the bone.

The effect of general dehydration of the body on the properties of long tubular bones has been studied (OMKirichok, 2003), and this condition shows its influence on the adaptation process of bones at different stages of postnatal ontogenesis. The author notes that the composition of micro- and macroelements of bones changes slightly during general dehydration, and high resistance is higher mainly in juvenile and adult animals.



### Western European Journal of Medicine and Medical Science

Volume 2, Issue 5, May, 2024

https://westerneuropeanstudies.com/index.php/3

ISSN (E): 2942-1918 Open Access | Peer Reviewed

© 🕦 This article/work is licensed under CC Attribution-Non-Commercial 4.0

In the scientific research conducted by DGIvanov (2007), when laboratory animals are exposed to heat every day for 7 days, the process of absorption of bone tissue increases, and on the 5th day, osteoclastic properties of bone prevail over osteoblastic properties. It has been proven that cracks appear, bone beams become brittle.

It has been determined in the experiment that long tubular bones show changes in the characteristics of adaptation according to the living conditions of animals with a normotonic vegetative nervous system (ALBilyk, Ya.I. Fedonyuk, 2004). According to the authors, these morphological changes include compression of the epiphyseal bone, expansion of the marrow cavity area, loss of porous material in the osteogenesis zone, reduction of the total bone ash content, increase of sodium content, decrease of potassium, observed with signs such as.

The obtained results and their analysis. Absolute length, one of the main linear dimensions of the humerus, has been observed to exhibit specific morphometric characteristics at different stages of postnatal ontogeny of animals.

The absolute indicator of the length of the shoulder bone of Karakol sheep is 8.83 cm in the first 3 days of postnatal development, its rapid increase during the period up to the next 3 months, that is, it reaches 12.1 cm, during this period and the growth coefficient of this indicator was observed to be equal to 1.37 times. The absolute size of the bone length in 12-month old animals remains almost unchanged compared to 3-month-old animals, that is, this indicator is 12.5 cm, the growth coefficient is 1.03 times. At the 18-month stage of postnatal ontogenesis, the absolute length of the shoulder bone increases by 13.1 cm, and the growth coefficient increases by 1.05 times compared to 12 months, and at the 36 and 48 months, this indicator decreases without significant deviations, i.e. 36 it was observed to be equal to 12.6 cm (K = 0.96) at 48 months and 12.33 cm (K = 0.97) at 48 months. The absolute index of humerus length in 60-month-old Black sheep was the highest in all studied physiological stages, i.e., an increase of 14.8 cm compared to that of 48-month-old sheep. and the coefficient was noted to be equal to 1.2 times. The growth coefficient of the absolute indicator of the length of the shoulder bone was 1.67 times during the period of postnatal development from 3 days to 60 months.

The absolute length of the scapula of domestic sheep is 9.2 cm in the first 3 days of postnatal development, and at the next stage of development, i.e., at 3 months, this indicator increases sharply to 13.8 cm. during this period, the growth coefficient reached 1.5 times. The absolute length of the humerus does not change almost at the stage after 3 months, that is, in 12-month old animals, this indicator is 13.7 cm, and the growth coefficient is 0.99 times. At the physiologically mature age of animals, at 18 months, this bone index increases somewhat significantly compared to younger age groups, that is, it reaches 15.2 cm, and the growth coefficient compared to 12 months old reaches 1.11 times. The absolute length of the humerus at the 36-month stage of postnatal development sharply decreases compared to 18 months, that is, it is 13.4 cm, the growth coefficient is 0.88 times, and in 48-month old animals it does not change significantly - 13.6 cm, the growth factor is 1.01 times. The absolute length of the humerus at the age of 60 months of the animals reaches the highest index, 16.3 cm, the growth coefficient is 1.19 times, as compared to that of black sheep, compared to all the studied stages of postnatal ontogenesis. The coefficient of bone growth was 1.77 times during all the studied stages.

The absolute indicator of the weight of the shoulder bone of Karakol sheep at the 3-day stage of postnatal development of animals is 18.43 g, and during the period up to the first 3 months, this indicator increases sharply, that is, it is 59, up to 65 g, and the growth coefficient



## Western European Journal of Medicine and Medical Science

Volume 2, Issue 5, May, 2024 https://westerneuropeanstudies.com/index.php/3

ISSN (E): 2942-1918 Open Access Peer Reviewed

© 📆 This article/work is licensed under CC Attribution-Non-Commercial 4.0

was observed to reach 3.23 times. At the 12-month stage of postnatal development, this bone index did not change significantly (60.73 cm, K = 1.02), and at the 18-month stage, it slightly increased compared to the lower stages, that is, by 77.57 g, to that of the 12-month-old and the relative growth coefficient was found to reach 1.27 times. After 18 months of postnatal ontogeny, the absolute weight of the humerus significantly decreases at the 36th and 48th stages, that is, this indicator is 57.43 g at 36 months, the growth coefficient is 0.74, at 48 months it is 55, 76 g, the growth factor is 0.97 times. It was found that the absolute weight of this bone at the 60-month stage of postnatal development of Karakol sheep shows the highest index compared to all the studied stages. That is, the absolute weight of the bone at 60 months is 97.9 g, and the growth coefficient is 1.75 times compared to that at 48 months. During the stages of postnatal ontogeny of animals from 3 days to 60 months of age, it was observed that the coefficient of growth of the absolute weight of the bone was equal to 5.31 times.

The absolute weight of the scapula of Domestic sheep increases rapidly from 3 days to 3 months of postnatal development, this indicator reaches 18.96 g to 62.73 g, or the growth coefficient during this period is 3.31 times. In the next 12 months of postnatal development, this indicator increases noticeably, that is, it is 68.87 g, the growth coefficient is 1.09 times. The absolute weight of the humerus is 85.8 g, and the coefficient of growth is 1.24 times at 18 months of postnatal development. The absolute weight of the bone in these sheep also slightly decreases at the stages of 36 and 48 months of postnatal development, that is, it is 62.46 g at 36 months, the growth coefficient is 0.72 times, and it is 63.1 g at 48 months. , the growth coefficient will be equal to 1.01 g. The absolute weight of the humerus at 60 months of age shows the highest value in comparison to all ages studied in Jaidari sheep, that is, it is 98.8 g, and the coefficient of growth is 1.56 times. Bone of weight growth coefficient of postnatal ontogeny studied from 3 days to 60 months up to 5.21 times equal to to be was determined .

**Conclusion.** Various to breed belongs to has been sheep stylopodium of the bones linear dimensions and of weight absolute indicators their legs in the skeleton is located to the place according to to himself special features manifestation weight and of shaking high or low with depends respectively to be note done

Stylopodium of the bones linear dimensions and of weight absolute indicators of sheep from the breed strictly nazar , postnatal development for the first 3 months until fast increase , physiological adult enough stage , that is , at 18 months high to the step rise and 36 and 48 months old in stages to 18 months relatively them somewhat decrease was determined .

#### List of used literature.

- 1. Антипина Е.Е. Костные остатки животных из поселения Горный (биологические и археологические аспекты исследования) // Российская археология. Москва, 1999. № 1. С. 103-116.
- 2. Билык А.Л., Федонюк Я.И. Закономерности адаптационных изменений в длинных костях скелета животных с нормотоническим типом вегетативной нервной системы при клеточном эксикозе // Морфология. Т. 126. Вып. 4. Тезисы докладов VII конгресса международной ассоциации морфологов. Санкт-Петербург, 2004. С. 20.
- 3. Дурткаринов Е.С. Микроархитектоника компактного вещества кости у животных при различной статолокомоции // Морфология. Т. 126. Вып. 4. Тезисы докладов



#### Western European Journal of Medicine and Medical **Science**

Volume 2, Issue 5, May, 2024 https://westerneuropeanstudies.com/index.php/3

ISSN (E): 2942-1918

This article/work is licensed under CC Attribution-Non-Commercial 4.0

VII конгресса международной ассоциации морфологов. - Санкт-Петербург, 2004.

- 4. Иванов Д.Г. Реакция эндокринной системы и морфофункциональное состояние костной ткани под влиянием постоянного магнитного поля в условиях тепловой нагрузки: Автореф. дис....канд. биол. наук. – Самара, 2007. - 18 с.
- 5. Киричок О.М. Вековые изменения в костях скелета при адаптации организма к общему обезвоживанию в период реадаптации: Автореф. дис... канд.мед.наук. – Тернополь, 2003. - 20 с.
- 6. Eshmatov, G. (2023). THE EFFECT OF FERULA ASSAFOETIDA GRAIN ON THE ORGANISM OF KARAKOL SHEEP. Ethiopian International Journal of Multidisciplinary Research, 10(12), 248-251.
- 7. ESHMATOV GʻAYRAT XURRAM OʻGʻli. "Qorako'l qo'ylar qon zardobining ferment ko'rsatkichlariga Ferula assafoetidaning ta'siri" Veterinariya meditsinasi 1/1/2020
- 8. ESHMATOV G'AYRAT XURRAM O'G'LI. "Kufestrol preparati qo'shib berilgan qo'ylar qonining morfologik ko'rsatkichlari" Veterinariya meditsinasi. 2023/1/1.
- 9. PhD Z. Kamolov A Doctoral Candidate G. Kh Eshmatov "Natural Geographic Distribution of Plants Belonging to the Ferula L Family" Pindus Journal of Culture, Literature, and ELT, 2023 1-5.
- 10. ESHMATOV GʻAYRAT XURRAM OʻGʻLI. "Qorako'l qo'ylar serpushtligiga Feula assafoetida o'simligning ta'siri va uni oldini olish bo'yicha tavsiyanima" O 'zbekiston Respublikasi Veterinariya va chorvachilikni rivojlantirish davlat qo 'mitasi me'yoriy hujjatlar bo 'yicha kengash majlisida muhokama qilingan, tasdiqlangan va chop etish uchun tavsiya qilingan. Toshkent 2020.
- 11. ESHMATOV G'AYRAT XURRAM O'G'LI. "Ferula assafoetida o'simligi donining qorako'l qo'ylar qonining immunologik ko'rsatkichlariga ta'siri" "Veterinariya meditsinasi" ilmiy-ommabop jurnali, 2020/1/1
- 12. ESHMATOV GʻAYRAT XURRAM OʻGʻLI. "Ferula assafoetida o'simligi don bilan oziqlantirilgan qorako'l qo'ylar qonining morfologik ko'rsatkichlari" International scientific-practical online conference on" Emergency management and public health research in asia" 2020/1/1.
- 13. ESHMATOV GʻAYRAT XURRAM OʻGʻLI. "Kovrak donining quyonlardan olingan bolalar soni va tirik vaznining o'sishiga ta'siri", "O 'zbekiston qishloq va suv xo 'jaligi" jurnal. 2020/1/1.
- 14. 15. ESHMATOV GʻAYRAT XURRAM OʻGʻLI. "Kovrak (Ferula assafoetida) donining qorako'l qo'ylardan olingan qo'zilar maxsuldorligiga ta'siri", Veterinariya va chorvachilikni rivojlantirish istiqbollari: zamonaviy amaliyot va innovatsion texnologiyalar Respublika ilmiy-amaliy konferensiya materiallari to 'plami, 2020/1/1
- 15. 16. ESHMATOV G'AYRAT XURRAM O'G'LI. "Biologicheski veshestva, vxodyashi ix estroggennoy aktivnosti" V Mejdunarodnaya nauchnoprakticheskaya konferensiya Nauka i obrazovanie v sovremennom mire: Vыzovы XXI veka. Nur-Sultan, Kazaxistan 2019.
- 16. 17. ESHMATOV GʻAYRAT XURRAM OʻGʻLI. "Laboratoriya hayvonlari quyonlar serpushtligiga Ferula assofoetida o'simligi tarkibidagi biologik aktiv moddalarning ta'siri" Agro protsessing jurnali, 2019/1/1.



#### Western European Journal of Medicine and Medical **Science**

Volume 2, Issue 5, May, 2024 https://westerneuropeanstudies.com/index.php/3

ISSN (E): 2942-1918

This article/work is licensed under CC Attribution-Non-Commercial 4.0

- 17. 18. ESHMATOV GʻAYRAT XURRAM OʻGʻLI. "Deystvie semyan morfologicheskie pokazateli krovi i plodovitost krolikov" Journal of technical science and innovation, 2019/1/1.
- 18. 19.ESHMATOV GʻAYRAT XURRAM OʻGʻLI. "Izuchenie estrogennogo deystviya spirtovogo ekstrakta Ferula assafoetida u ovorektomirovannix kris" Materialы mejdunarodnoy konferensii po patofiziologii jivotnых, posvyaщennoy 90letiyu kafedrы patologicheskoy fiziologii fgou vpo «Spbgavm». 2011/1/1
- 19. Shoxonovich, Y. O., Niyozov, H. B., & Eshmatov, G. X. (2019). The karakul sheep breed (Ferula assafoetida) effect of vegetable juice. Asian Journal of Multidimensional *Research* (*AJMR*), 8(8), 73-77.