"Bones" *Ksw*" in pyramid texts"

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Abstract

Ancient Egyptians paid special attention to the body and conserving it. Methods of care for and conservation of the body are numerous through the ages. The Ancient Egyptian also knew the diseases that of the bones and excelled in diagnosing its cases, the most of which is congenital defects in foot, leg, back and skull.

The word "Ksw" bones held a great and significant meaning in religious texts, especially pyramid texts. These texts pointed out the building of the body and fixture of bones to revive it once more. The building of bones and amending them appeared among religious rites such as the rite of mouth opening.

The deceased hoped to be like Osiris where his bones are purified and embodied by his royal characteristics, so that they become royal characteristics. Thus, he is resurrected as a governing king in the hereafter. His bones are also purified as a harpoon in its sharpness and strength, as well as being transformed into metallic bones due to the extreme strength and rigidity. He flew high in the sky as his bones are those of a falcon.

He word also appeared to carry an important meaning in legends and religious sects, such as the legend of On and the legend of Osiris. This is what is handled by this study.

Keywords:

Bones, bone diseases, pyramid texts, reviving, conservation, legend of On, legend of Osiris.

الملخص

أهتم المصريون القدماء بالجسد والحفاظ عليه وقد تعددت طرق العناية بجسد وحفظه على مدار العصور ، كم عرف المصرى القديم الأمراض التي تصيب العظام وأجاد تشخيص حالاتها وكان أبرزها العيوب الخلقيه في القدم ، الساق، الظهر والجمجمه .

وقد حملت الكلمة " Ksw " عظام دلاله هامه وعظيمه في النصوص الدينية على الأخصر نصوص الأهراء حيث اشارت النصوص الى ما يفيد بناء الجسد وتثبيت العظام في مكانها لأعادة الحياه مره آخرى ، وظهر بناء العظام وتعديله ضمن طقوس الدينية كطقسه فتح الفم .

هذا وتمنى المتوفى أن يصبح مثل أوزير حيث تطهر عظامه كما تجسد بصفاته الملكية لتصبح عظامه هي عظام الملك فيبعث كملك حاكم في العالم الآخر ، وطهرت عظامه كخطاف في حدتها وقوتها كما تحولت عظامه لعظام معدنية لفرط قوته وصلابتها ، وحلق عالياً في السماء لأن عظاما هي عظام الصقور

ظهرت الكلمة " qsw " أيضاً لتحمل دلاله هامه في الأساطير والمذاهب الدينيه كاسطور: عيز شمس والأسطور: الأوز رية وهو ما ستناوله الدراسه .

الكلمات الداله:

عظام ، أمراض العظام نصوص الأهرام ، إعادة إحياء، حمايه ، أسطورة عين شمس : الأسطورة الأوزيريه .

Introduction:

There was an interest in conserving the body throughout their ages by the natural method, due to being buried in the desert sands where there is very high heat and no humidity, except through development of burial methods in the age of dynasties when muddy and desert tombs were built to conserve bodies. In the first three dynasties, the conservation method was to cover the body with flax soaked in resin. The shapes also took the form of the face, body and sometimes some limbs were found covered separately from the body.¹

The interest in conserving the body emerged from the belief of the Egyptians that the body is the place of ka² without which the afterlife would be complete, such life that all yearn for. Therefore, it must be protected against all harm or decay that can happen to it and that can reach the stage of losing a member by death. This issue appears in the statement of text on returning these members once more and fixing them in the body of the deceased.³

The bones were the main substrate for building the body. The Ancient Egyptian knew the bone diseases. The diseases or congenital defects go back to changes that occur in chromosomes, such as: losing or adding a whole or part of a chromosome and the result of such chromosome appears on that person.⁴

First: congenital defects in foot

There are many different congenital defects that affect the foot. The foot is anatomically divided into two main parts: the first is called "Hindfoot" and consists of the heel bone. The congenital defects of the hindfoot are a group of deformations

 3 Pyr 1684 , 1732; CT . VI 391a , BD. CXLVII , pl. XII .

And for more keywords about ht:

WB. III , S. 359 ; Gardiner , A., Eg . Gram. , p. 467 ;Budge , W., Osiris the Egyptian Resurrection, VOL, II , New York , 1973 , p. 123 .

¹Kanawati , N., The Tomb and its Signifance in Ancient Egypt , Cairo , PAS , 1999 , pp. 37-42.

² BD XXVI, 4.

⁴Thompson, J.S.& Thompson, M.W., Genetics in Medicine, U.S.A., 1983, p. 23.

called "Talipes". The second kind is called "Forefoot" and it consists of the rest of the foot bones. The congenital defects of the hindfoot are called "Pes"⁵. The forefoot consists of the bones forming the plantar arch, then the toe bones. The plantar arch helps the leg and foot bearthe weight and body. It also allows flexibility in walking and running and any increase or decrease in the foot is considered a deformation (Fig. 1)⁶

"Flat Foot"

It is the common deformation in the fore foot known as "Pes Planus". It is known for the flattening of the foot sole by the loss of the arching of the foot, so that the foot becomes close to the surface the injured person is standing on. (Fig 2)⁸

Congenital defects of the leg: Rickets:

It is one of the "Deficiency diseases" resulting from instability in Metabolism ¹⁰" of calcium and phosphorus. This leads to deformations in the body bones in general and leg bones in particular. ¹¹ (Fig. 3)¹²

Symptoms of Rickets:-

Rickets appears after months of deficiency of Vitamin D in the body. The disease has two phases: in the early phase, the skull bones weaken and become fragile. Inflations appear in the chest

 $^{^{\}rm 5}$ Rifaat , A.A., Amanuel of Surgery , Cairo , 1970 , p. 1023 .

 $^{^6} Stedman$, T.L., medical Dictionary , London , 1982, p. 1408 ; Dawson , W.A., "Pygmies , Dwarfs and Hunchback in Ancient Egypt " Med. Hist. IX , 1927 , p. 325 ; Weeks , K., The Anatomical , Konwledge of Ancient Egyptians and The Representation of Human Figure in Egyptian Art , PhD

Thesis, yale University, 1970, p. 125.

⁷ Rifaat , A.A., Amanuel of Surgery , p. 1023 ; Stedman , T.L., medical Dictionary , p. 552.

⁸ Hawas , Z., :" The Statue of the Dwarf $pr - ny - ^c nhw$ Recently Discovered at Giza " MDAIK 47 , 1991 , p. 158, tafel 13.

⁹Darby , W., Ghalioungui and Grivetti , L., Food : The Gift of Osiris , Vol. I , London , 1977 , p. 79 ;Kamal , H., Dictioary of pharonic Medicine , Cairo , 1967 , p. 187.

¹⁰William . A., Medical Dictionary , London , p.501.

¹¹Siegerist, H.E., A History of Medicine, Vol.I, Oxford, 1951, p. 47.

¹²Petrie , F., Royal Tombs of Earliest Dynastie , Vol.II , London , 1907 , pl.26.

ribs and its bones protrude to the front (anterior side), this is known as Pigeon ches ¹³

Genu Recurvatum

It is one of the deformations of the leg. It is common among females and rare among males. Here, the knee joint becomes concave more than enough (fig. 4), with concavity in the leg. It could be congenital due to deformation of the embryo inside the womb. It could also occur it could be due to the bad bone structure ¹⁴position in the womb, or as a result of paralysis in the lower limb, and this leads to weakening and muscular atrophy. Finally, it could occur as a result of illness of bones or joints such as: lower limb fracture or loosening of ligaments around the knee. Body weight can affect the occurrence of the disease, especially occurring at the same time with weak bone structure. ¹⁵

Thirdly: congenital defects in upper limbs:

Upper limbs also suffer from some congenital defectsas: "Short Arm" (Fig. 5)¹⁶, lack in the number of fingers, and in the forearm in one or both arms "phocomelia". The defects result from a genetic defect or mother taking medicine or herb falsely during pregnancy. (fig6 ¹⁸)

Congenital defects in the back:

Back congenital defects depend on the efficiency extent of bones and muscles. Muscles linked to the vertebral column affect the increase of vertebral column curvature. If these muscles

About deformations in late eras view: Ruffer , M., $\,$:an Dwarfs and Some Deformed Persons in Ancient Egypt " , BSAA13 , 1911, pp. 170,198 .

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¹³Stedman , T.L., medical Dictionary , p. 1238.

¹⁴Stedman, T.L., Medical Dictionary, p. 582.

 $^{^{\}rm 15}$ Rifaat , A.A., Amanuel of Surgery , p. 1023 .

 $^{^{16}}$ Stedman , T.L., medical Dictionary , p. 12 ; Dasen , V., "Dwarfism in Egypt and Classical Antiquity : Iconography and Medical History " , Med.History , 32 , 1988 , p. 7-11 , fig. 1 .

¹⁷ Stedman , T.L., Medical Dictionary ,London , 1982, p. 1075 ; EL – Dawkhly , Z., First Physician and the Role of Handicapped People in Ancient Egypt "in : the International Society of Archaeologists , Fifth International Conference of Egyptology , under the Presidency of Proffesor Mohamed AbdelHalim Nur-eldin Head of the Antiquites Organization, 29 October – 3 November , 1988, p. 76 .

¹⁸Davies, N. de G., The Tomb of Nakht at Theban, New York, 1917, pl. 18.

weaken disequilibrium happens and the shape of natural curvatures changes accordingly. This results in deformations in the vertebral column.¹⁹

Of the most famous vertebral deformations are:-

Kyphosis:

It is the outward curvature of the spine and inward curvature of chest and abdomen, a slight forward head with drawal with a tilt of the back ²⁰ of the head to the back.(Fig.7)²¹

Lateral bending

It is one of the deformations of the vertebral column. It is the vertebral column bending to one side²²where the vertebrae leave their normal position, which leads to expansion and divergence of vertebrae from one side and pressuring and convergence from another side, accompanied by aggregation of ribs and their protrusion from the injured side in the lateral flexion.²³

Inward back curvature (Lordosis)

It is an abnormal increase in concavity of vertebral column ²⁴ known for is disparity in the shape of the pelvis anteriorly, accompanied by a protrusion in the abdomen and hips.²⁵

Congenital defects in skull:

Congenital Hydrocephalus is one of the congenital defects of the skull. It causes blockage in the cycle of the cerebrospinal fluid. This causes enlargement in the head size and increase of pressure in the skull. This in turn affects brain cells, nerves and centers responsible for functions of all body systems Respiratory

 $^{^{\}rm 19}$ Rfaat , A.A., Principles and Practice or Surgery , Vol. I , Cairo , 1988 , pp. 551-554 .

 $^{^{20}}Stedman$, T.L., Medical Dictionary , p. 1238; Dawson , W.R., "Pygmies and Dwarfs in Ancient Egypt : , JEA 24 $\,$, 1938 , p. 325

 $^{^{21}}$ Rifaat , A.A., Principles and Practice or Surgery , Vol. I , p. 553 ; Geoffery , T.M., The Hidden Tomb of Memphis , London , 1991 , fig. 125 .

 $Look\ up\ : Hassan\ ,\ S.,\ Excavation\ at\ Giza\ ,\ Vol.\ V,\ Cairo\ ,\ 1933,\ pp.\ 34,\ 266,\ fig.\ 122;\ Wild\ ,\ H.,\ ``\ Le\ Tombeau\ de\ Ti\ ``\ MIFAO\ 65\ ,\ Vol.\ II\ ,\ Le\ Caire\ ,\ 1953\ ,\ pl.\ 26\ ;\ Quibelle\ ,\ J.E.,\ Excavation\ at\ Saqqarah\ ,\ Vol.II\ ,\ Cairo\ ,\ 1909,\ p.\ 115\ ,\ pl.\ 62\ .$

²²Stedman, T.L., Medical Dictionary, p. 1268.

²³Rifaat, A.A., Principles and Practice or Surgery, Vol. I, p. 551.

 $^{^{24}\}mbox{Rifaat}$, A.APrinciples and Practice or Surgery , Vol. I , p. 554; Stedman , T.L., Medical Dictionary , p. 810 .

 $^{^{25}\}mbox{Dawson}$, W.R., Magican and Leech , London , 1929 , pl. 107 .

and Circulatory systems. Repercussions can lead to paralysis and disequilibrium, and injury of senses because of a lack in the brain and this called "Posterior Congenital Hydrocephalus". (Fig. 8²⁷)

Parrot Disease:-

It is one of the hereditary bone diseases that occur in the longitudinal limb bones such as: legs and arms scientifically known as "Achondroplasia". It means a disturbance in the growth of longitudinal bones. A normal person longitudinally through the growth of these endings until the centers of limb bone growth completely seize to grow. Then, the length becomes stable at this limit and when this disease is present in the human bones, it leads to seized bone growth of limbs longitudinally.²⁸

The knowledge of the Ancient Egyptian of the bone diseases and human structure was a reason for the interest of texts in it. Thus, the scholar dealt with the subject of bones "ksw" in pyramid texts where passages 13-15 state the body restructure

where the head is fixed to the bones. where the head is fixed to the bones.
$$2^9$$
 and 2^9 and

Recitation: "I put your head for you and fixed your head to your bones",31

In another passage, restoration and mending of bones appears as a ritual of mouth opening ³² as spell 20 states the following ³³:

²⁶Rifaat, A.A., Principles and Practice or Surgery, Vol. I,p. 528.

²⁷Smith, W.S., A History of Egyptian Sculpture and Painting in the Old Kingdom, Boston , 1949, pp. 58,64, pl. 25 (d)

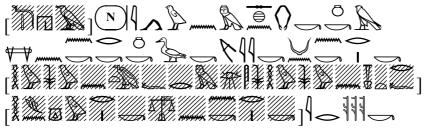
²⁸Sigerist, H.E., A History of Medicine, Oxford, 1951, p. 45.

²⁹PT 13 (Pyr 9b).

³⁰Carrier, C., Textes Des Pyramides de L'Egypte Ancienne, Tome III, Paris, Cybele, 2010, N/F/NeI, p. 1244.

³¹Allen, J.P., The Ancient Egyptian pyramid Text, Writings from the Ancient World 23, Atlanta, 2005, N.92.

³²About the rituals of mouth opening: Roth, A.M., "Opening the Mouth" OEAE II, 2001, p. 605; Goyon, J.C., Ritual Funéraires de L'ancienne Egypte, Paris, 1972, pp.80-90; Otto , E., Das Ägyptische Mündoffnungs Ritual ", ÄA 3 ,Vol. 2 , 1960 , pp. 155-158 ; Blackman, A.M., "The Rite of Opening the Mouth in Ancient Egypt and Babylonia". JEA 10, 1924, pp. 53-55; Roth, A.M., "The psš – kf and the Opening of the Mouth



dd mdw h3 (N) iw . n .(i) m shn .k ink Ḥr mdd .n(i) n .k r3 .k ink s3 .k mry.k wp .n.(i) n.k r3 .k hw sw n mwt .f rmi sw hw sw n sm3t r.f hngw r3 .k mh3 . n .. i n.k r3.k ir ksw.k³⁴
Recitation: "O King I came in search for you; I am Horus; I split for you your mouth; I am your beloved son; I opened for you your mouth; I announce it for his mother when she mourns him; I announce him for this one took care of him; your mouth is in a good state, as I adjusted your mouth with your bones for you³⁵".

There are official hopes to be like Osiris, as his bones³⁶ are purified of all evils and in that spell 36 states the following³⁷:-



Bd r.k dd .t pn imyt snw.k ntrw bd r.k tp r3 .k sw^cb .k ksw.k tmiw htm .k irt.k wsir di n.i n.k irt Ḥr³⁸

"Your natron remains between your brothers, gods; your natron is on your mouth; may you purify your bones and end any evil against you; o Osiris, I granted to you Horus's eye." 39

Ceremony, A ritual of Birth and Rebirth:, JEA 78, 1992, pp. 127-129; Baly, C., "Notes on the Ritual of Opening the Mouth", JEA 16, 1930, p. 174.

³⁴Carrier , C., Textes Des Pyramides de L'Egypte Ancienne , Tome III, N/F/Ne I3 , p. 1244.
 ³⁵Allen , J.P., Pyramid Texts , N. 99; Faulkner , R.O., AEPT , p. 3 .

³³ PT 20 (Pyr11a -12b)

³⁶Purification rites were made by using salt such as natron salt and about this view: Blackman, M., "Some Notes on Ancient Egyptian Practice of Washing the Dead ", JEA 5 /3, 1918, p.156;Id., "The Significance of Incense and Libations in Funerary and Temple Ritual ", ZÄS 50, 1912, S.71; Bonneau, D., "La Crue du Nil, divinte égyptienne à Travers Mille ans d'histoire, Paris, 1974, p. 238; Kaplony, H., "Wasser", LÄ III, Col-9. ³⁷PT 36(28b-29 b).

 $^{^{38}}$ Carrier , C., Textes Des Pyramides de L'Egypte Ancienne , Tome II, N/F/NeI 29-39, p.1254.

³⁹Allen , J.P., Pyramid Texts , W. 24; Faulkner , R.O., AEPT , p. 8 .

The deceased compared his bones to holy falcon bones for his strength and ability to fly. Passages 136-137 of spell 214 state:⁴⁰



h3 (w) s3 .k š dd mdw sp 4 ii wpwtyw k3 .k ir .k ii wpwytw it.k ir.k ii wpwtyw R^c ir .k isi m- ht itn .k w^cbw .k ir .k ksw.k bikwt ntrwt imyt pt wn.k ir gs ntr⁴¹

"O King beware of the lake recite 4 times the messengers⁴² of your equal came to you, the messengers of your father came to you; the messengers of Re came to you; go protected by the sun and purify yourself; your bones are those of the holy falcons in the sky; may you be by the gods". 43

Osiris, the deceased, also gained royal characteristics so his bones become those of the king so he is resurrected as a governor hereafter the in events of spell



dt.k dt nt NN pn iwf.k iw.f n NN pn ksw.k ksw. NN pn 45 "Your body is that of this king; your skin is that of this king; your bones are those of this king.⁴⁶

⁴¹Carrier, C., Textes Des Pyramides de L'Egypte Ancienne, Tome II, N/F/S CTI-2, p.1404. ⁴²For messengers and their religious roles in activation of diseases and seizing spirits view:

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⁴⁰PT 214 (Pyr 136a – 137c).

Suys, E.," Étude sur Le conte du Fêllah plaideur", Anor 5, 1933, pp.81-121, Id., Les Messagers des Dieux, ERT II, 1939, pp. 123-139; Firchow, O., Die Boten der Götter, VIO 29, 1955, pp. 85-92; Derchain, P., La Mort ravisseuse, CdE 33, 1958, pp. 29-32; Meeks, D., "Génies Anges et Démons", Sources, Or 8, 1971, pp. 44-49.

⁴³Allen, J.P., Pyramid Texts, W 147.

⁴⁴PT 219 (Pyr193a-193b).

⁴⁵Carrier, C., Textes Des Pyramides de L'Egypte Ancienne, Tome II, N/F/S C33-35, p.1428.

⁴⁶Faulkner, RO., AEPT, p. 48.

Here, there is an indication to the theory of On,⁴⁷ where the deceased rises with Aton and gets the care of the Lady of On and crosses his paved road in the bones of shu. The spell states the following:⁴⁸



Wbn n.k hn^c it.k tm ifh n.k m m3rw tp.k n rpw.t iwnt pr.k wp.k w3t .k m ksw šw⁴⁹

"May you rise with your father "Atum"⁵⁰, your needs be loosened?⁵¹ From you, your head is cared for by "Master of On";ascend and open your way in bones of Shu.⁵²"

The bones of the deceased were also compared to a harpoon in its sharpness and strength as in spell 231⁵³:-

Recital: your bones are a harpoon and you are a harpoon and the wishes (desires) are limited. ⁵⁵

Here, there is a reference to the Osirian legend when the king is resurrected in the Osirian image, so his bones become strong and his illnesses or diseases are removed.⁵⁶



⁴⁷About the theory of Own view: Baines , J., and Mélek , Jaromlr , Atlas of Ancient Egypt, New York , 1984, p. 173; Allen , J.P., Genesis in Egypt .the philosophy of Ancient Egyptian Creation Accounts , New Haven , 1988 , (yale Egyptological Stydies2) , p. 9 .; Zandee , J., the Birth . Giving Creator – God in Ancient Egypt , London , 1992 , p. 169 . ⁴⁸PT 222 (Pyr193a-193b) .

 $^{^{49}\}text{Carrier}$, C., Textes Des Pyramides de L'Egypte Ancienne , Tome III, N/F/S C42-43, p.1436.

⁵⁰ Written in that way, view: Wb v,301(4)

⁵¹ Be loosened appeared in this text in the passive form

⁵²Allen , J.P., Pyramid Texts , W 155 ; Faulkner , RO., AEPT , p. 50 .

⁵³PT 231 (Pyr235a).

⁵⁴Carrier, C., Textes Des Pyramides de L'Egypte Ancienne, Tome I, W/F/W 16-23, p.90.

 $^{^{55}}Allen$, J.P., Pyramid Texts , W 6 .

⁵⁶PT 258(Pyr308a-308d) .

"Bones" Ksw" in pyramid texts"_____

 $\underline{d}d$ mdw NN pn pw wsir m ssw $srw\underline{d}$ ksw NN pn drw $s\underline{d}bw$ $star^{57}$

Recital: "King NN is Osiris the sand storm the bones of this king have become strong and his illness is removed." ⁵⁸

And when the king was revealed in his strength and Akr's bones trembled, the planets quietened. Here, spell 273 states:-⁵⁹



Gb pt ihy sb3w nmnmt $p\underline{d}$.wt sd3w ksw 3kr grr .sn gnmw m33.sn NN h^c b3 m $n\underline{t}r$ c nh m itw .f $^{(60)}$

"The sky is cloudy; the star became dark and the celestial dome is shaking; the bones of Akr are trembling and the planets are stilled when they see the king revealed in his strength as a god living by his fathers". ⁶¹

In addition, the bones of enemies have become a food the king devours to exterminate them and be resurrected as a victorious king in the hereafter.⁶²



sk b3 .sn m ht NN 3hw .sn hr NN m h ht .f r ntrw krrt n NN ksw.sn equation

"Beware their souls are in the king's belly; their souls are in the care of the king, as surplus of the surface of food that is cooked from their bones for the gods". 64

 $^{60}\text{Carrier}$, C., Textes Des Pyramides de L'Egypte Ancienne , Tome I, T/A/E 28, p.340.

⁶³Carrier , C., Textes Des Pyramides de L'Egypte Ancienne , Tome I, T/A/E 39, p.346.

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⁵⁷Carrier , C., Textes Des Pyramides de L'Egypte Ancienne , Tome I, W/A/W Inf 27-32, p.124, W/A/W 33-37 , p. 126 .

⁵⁸Allen , J.P., Pyramid Texts , T 193 ; Faulkner , R.O., AEPT , p. 68 .

⁵⁹PT 273 (Pyr393a-394b).

 $^{^{61}} Allen$, J.P., Pyramid Texts , W180a ; Faulkner , R.O., AEPT , p. 80 .

⁶²PT 325 (Pyr528c-530b).

⁶⁴Allen , J.P., Pyramid Texts , W180b ; Faulkner , R.O., AEPT , p. 82-83 .

What the deceased king hoped was great: that his bones be transformed to metal bones in its rigidity and strength, and this meaning is clear in spell 325 which states the following:-65

m sht i3rw w'b NN m sht i3rw w'b ir NN šsp fn .f ksw .f bi3
3w .f n.f 'wt .f ihmt sk imyt ht mwt.f nwt 66

"He goes up in the fields of Rushes; the king is purified in the fields of Rushes; the king is purified and receives his metal bones and extends himself for himself; his limbs are the imperishable stars⁶⁷that are in the Nut's womb⁶⁸."

And in the events of spell 357 of the pyramid, the deceased embodying the characteristics of Horus hoped to get healthy bones:⁶⁹



"Horus's strength accompanies you in your name in the horizon. Thus, Re emerges from him. In hugging you in your name in the

 $^{66}\text{Carrier}$, C., Textes Des Pyramides de L'Egypte Ancienne , Tome I, T/F/W 17-24, p.204, T/F/W 25-32, p.206 .

⁶⁵PT 274 (Pyr 528c-530b).

 $^{^{67}}$ They were called the imperishable stars as these stars never set under the horizon and cannot be seen during the day due to strong sunlight, and for more, view: Sloley , R.W., "Primitive Methods of Measuring Time " , JEA 17 , 1931 , p. 169 ; Faulkner , R.O., "the King and Star Religion in the Pyramid Texts " , JNES 25 , 1966 , p. 153 ; Beckerath , J., " Circumpolarsterne " in LÄ I , 1975 , Col . 971 ; Barta , W., "Funktion and Lokalisierung der Zirkumpolarsterne in Pyramid Texten ", ZÄS 107 , 1980 , SS. 3-4 .

⁶⁸Allen, J.P., Pyramid Texts, T10.

⁶⁹PT 357 (Pyr 585a – 357d).

⁷⁰Carrier , C., Textes Des Pyramides de L'Egypte Ancienne , Tome IV, M/F/E Sup 29-35, p.188.

palace, may his arms embrace him; your bones are healthy and vour heart is proud.⁷¹ "

He also hoped to be resurrected once more, so his bones are collected and covered by flesh and dust is removed off his body. By this meaning, spell 373 states ⁷²the following:-

dd mdw ihi ihi ts tw NN pw šsp. n .k tp .k inķ.. n .k ksw.k s3k. n.k 'w.t.k wh3 n.k t3 ir iwf.k ⁷³

Recital: oh oh! raise yourself King received your head, collected your bones, gathered your members and remove the dust (literally) from your body.⁷⁴

The king has been merged with the imperishable stars, so as his bones do not perish nor his body is decomposed, and here spell 412 of pyramid texts states:⁷⁵



ndr .k ir ' ihm .sk n htm ksw .k n swnw iwf .k NN^{76}

"You hold imperishable stars in (your) hands; your bones shall not perish and your body shall not decompose".⁷⁷

The roles of goddess Tayt, goddess of weaving⁷⁸were distinctive in protecting the king and gathering his bones, where spell 415 states the following⁷⁹:-

⁷¹Allen, J.P., Pyramid Texts, T146; Faulkner, R.O., AEPT, p. 80.

⁷²PT 373 (Pyr 654a –d).

⁷³Carrier, C., Textes Des Pyramides de L'Egypte Ancienne, Tome III, N/F/W inf A53-57, p.1234.

⁷⁴ Allen, J.P., Pyramid Texts, T204; Faulkner, R.O., AEPT, p. 123.

⁷⁵PT 412 (Pvr 624d –725a).

⁷⁶Carrier, C., Textes Des Pyramides de L'Egypte Ancienne, Tome III, N/F/N W Med I36-40, p.1234.

⁷⁷Allen, J.P., Pyramid Texts, T228; Faulkner, R.O., AEPT, p. 135.

⁷⁸El Saady, H., "Reflections on the Goddess Tayet", JEA 80, 1994, 213; Derchain – Utel ., M., "tait", LÄVI, Cols .185; Wb, V, 231.

⁷⁹PT 415 (Pyr738a-739c).



<u>dd</u> mdw in<u>d</u> hr.<u>t</u> t3yt n<u>d</u> ir.<u>t</u> tp n NN im .f sšw s3k .<u>t</u> ksw NN im . sn šsw dit mrwt NN m ht ntr nb

Recital:"Peace be upon you tayt.....

Guard the king's head so that it is not lost

Gather the king's bones so that they are not lost

Put the love of the king inside the body of every god ".81

Nut, God of the sky, the Great Protector⁸²performed the same role, as she gathered the bones of the deceased king to rise to life as stated in spell 447:-⁸³



Ti mwt .k n g3w.k Nwt n g3w.k hnmt wr n g3w.k hnmt sndw n g3w.k hnmt.s kw hw.s g3w.k dw.s n.k tp.k i5b.s n.k ksw .k⁸⁴

"Your mother came and you shall not be poor (needy); Nut and you shall not be needy; the Great Protector and you shall not be needy; protector of the scared and you shall not be needy (poor); she will take care of you and protect you (prevent you) from need (poverty); she will give you your head and embrace your bones for you."

⁸⁰Carrier, C., Textes Des Pyramides de L'Egypte Ancienne, T/A-S/N 1-10, p. 366.

⁸¹ Allen , J.P., Pyramid Texts , T221 .

 $^{^{82}}$ Wilkinson , R., the Complete Gods and Goddesses of Ancient Egypt , London , 2002 , pp. 160-164 the Sky - G; Piankoff , A. the Sky – goddesses Nut and the Night Journey of the Sun " , JEA 20 , 1934 , pp. 57-61 .

⁸³PT 447 (Pyr827b-828b).

⁸⁴Carrier, C., Textes Des Pyramides de L'Egypte Ancienne, NT/F/W 1-4, p. 2430.

⁸⁵ Allen , J.P., Pyramid Texts , p.41b ;Faulkner , R.O., AEPT , p. 149.

"Bones" Ksw" in pyramid texts".

Both gods "Geb" and "Atum" participated in gathering the bones of deceased and protect him from evils that he faces in the hereafter, where spell 451 states⁸⁶:-



Tb. n.k ksw.k šsp. n.k tp.k hr Gb idr.f dwt iry.t.k pw hr Tm⁸⁷

"O King, I gathered your bones for you; you received your head for you; this is what Geb said; he shall remove evil in you King this is what "Atum" said⁸⁸."

And for this the king called the gods and souls Akh, so they receive him when he ascends the ladder to heaven and his bones are united again. 89



3h nb ntr nb wnt .f \(\cdot .f \) n NN hr m3kt dmd n ksw s3k n.f \(\cdot wt \) f stp n r f pn ir pt 90

"Every soul and any god will exist with his (arm) for the king when he ascends the ladder; his bones will unite and my limbs will be gathered, and he will jump to the sky."⁹¹

The best the deceased king hoped for was that his voice was true (becomes innocent) in front of his enemies in the divine iudgment. 92 Thus, his bones would be safe of any fractures. Here, spell 486 states:-93

⁸⁶PT 451 (Pyr840b-c).

⁸⁷Carrier, C., Textes Des Pyramides de L'Egypte Ancienne, IV, NT/F/W 9-13, p. 2434.

⁸⁸Allen , J.P., Pyramid Texts , p.45 ;Faulkner , R.O., AEPT , p. 150.

⁸⁹PT 478 (Pyr980 b-980c).

⁹⁰Carrier, C., Textes Des Pyramides de L'Egypte Ancienne, II, P/A/W 36-37, p. 768.

⁹¹ Allen, J.P., Pyramid Texts, N.428; Faulkner, R.O., AEPT, p. 166.

⁹² M3^r hrwhas many meanings among which the voice is true and is innocent, for more view: Brunner, H., "Maca-/cheru", L Ä III, Cols 1107 - 1110; Champollion, T.F., Dictionnaire Égyption, paris, 1841, p. 297; Anthes, R., "the Original Meaning of M3° – hrw", JNES 13, 1954, pp. 21-26; De Rougé, E., Mémoire sur L'Inscription du Tombeaux d' Ahmés, Paris, 1851, pp.37-38; Birch, M.S., Mémoire sur une Patére Egyptienne du Musée Du Louvre, Paris, 1858, pp. 71-72.; Brugsch, H., Dictionnaire Héroglyphique et



N m3° hrw hftyw.f ir.f n šw3 NN n k3w °nwt.f n hsb ksw m NN⁹⁴ "His foes shall not be triumphant; he shall not be poor; his nails shall not grow; the bones of NN shall not break".95

And in a merge with the events of the Osirian legend, Horus returns life to his father, so he gathers his bones once more. The events of spell 606 emphasize this role as stated by Horus:-⁹⁶



<u>dd</u> mdw 'h' n (i) it.(i) 'h' n . (i) wsir ink pw ink s3.k ink Ḥr ii n ir.k w'b . tw sw'b . tw s'nh .tw it NN ink n.k ksw .k⁹⁷

"Get up for me, my father; get up for me Osiris; it is I, your son, Horus; I came to cleanse you, purify you and return you to life O father NN, and I gather your bones for you.⁹⁸"

Spell 637 also as stated by Horus:-99



I mḥ tw mm^{sis} dt prt irt Ḥr I mḥ tw im.s ts.s n .k ksw .k dmḍ .s n .k ^cwt .k s3k .s n .k iwf .k sfḥ .s fdt .k dwt ir t3 ¹⁰⁰

Démotique Contenant en order Méthodique Les Mots et Les Groups Les plus Utilisés de La Langue et L'Écriture Sacrée et Populaire des Ancient Egyptiens, Paris, 1867.

⁹³ PT 486 (Pyr 1042d – 1043 a)

⁹⁴Carrier, C., Textes Des Pyramides de L'Egypte Ancienne, II, P/A/W 59-60, p. 768.

⁹⁵ Allen , J.P., Pyramid Texts , P.338 ; Faulkner , R.O., AEPT , p. 173.

⁹⁶PT 606 (Pyr 1683a – 1684b)

⁹⁷Carrier , C., Textes Des Pyramides de L'Egypte Ancienne , IV,Cybele , 2010,M/C Med W 1-8, p. 1992.

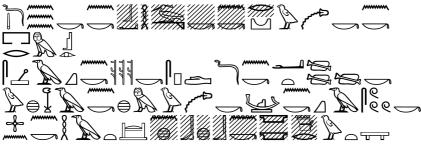
⁹⁸ Allen , J.P., Pyramid Texts , M.336 ; Faulkner , R.O., AEPT , p. 250.

⁹⁹PT637 (Pyr 1800c – 1801c)

"I will fill you with paint that came from the eye of Horus; when I fill you with it, then it will raise up your bones and will collect your members, and it will gather your flesh and it make your bad sweat fall to the ground. 101,"

"It" here means paint or ointment which came from the eyes of Horus and which will raise up your bones, ... etc.

Spell 676 stated the stages of rising of the deceased Osiris and his return to life as follows:- 102



dd mdw mw.k n .k b^ch .k n.k rdw .k n.k pr m wsir s3k n .k ksw .k spdd n .k ^cwt.k wh3 n.k hmw .k wh^c n .k k3sw .k wn n .k h3t nhbhb n.k ^cSwy drwt¹⁰³

"Recital: your water is for you; your liquid efflux that come out of Osiris is for you; I gather for your bones, I restore your members and remove your dust, untie your ties; the tomb shall be open for you, and the two gates of the coffin shall be pulled for you."

The deceased hoped that at the end he gets the protection obtained by Osiris on the day of bone-counting¹⁰⁵.



 sw^cb r^3 f m bd hsmn 106 hr mnty hnty-irty sw^cb cnwt f hrt hrt ir n f nw ir n.k n sn f Wsir hrw pw n ip ksw 107

¹⁰³Carrier , C., Textes Des Pyramides de L'Egypte Ancienne , III,NT/F/S e inf 29-34, p. 2522.

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¹⁰⁰ Carrier , C., Textes Des Pyramides de L'Egypte Ancienne , III,N/F/N e IV82-89, p. 1300, N/F/N e IV90-96, p. 1302.

¹⁰¹Allen , J.P., Pyramid Texts , N.302 ;Faulkner , R.O., AEPT , p. 263 .

¹⁰²PT675 (Pyr 2007a – 2009a).

¹⁰⁴Allen, J.P., Pyramid Texts, N.411; Faulkner, R.O., AEPT, p. 489.

 $^{^{105}}$ PT676 (Pyr 2015c – 2016a).

"May Osiris purify his mouth with natron; purify him over *hnty* – *irty's* thighs; purify his upper and lower nails, and do for him what you did for his brother Osiris; it's the day of bone counting." 108

The pure king was also flying high like a holy falcon to the sky and raising his bones, and here spell 682 mentioned the following 109.



igp NN m bik ntr¹¹⁰ kbh NN m hw ittNN m smn dnh NN m bik ntr tpt dnhw NN pn m bik ntr ts ksw NN wt wb NN¹¹¹

"The king flies like a holy falcon; the king flies high like a heron; the king flies like geese "smn"; the wings of the king are like the holy falcon; the feathers of the king's wings are like those of the holy falcon; they raise the bones of the mummified king because the king is pure." 112

Conclusion:

The word "ksw" the bones carried many important indications and great symbolism in religious texts especially pyramid texts, as the restoration of bones and fixing them was linked to revival and to power and royal sovereignty. The bones of the deceased king were compared to bones of falcon flying high in the sky.

The bones of the deceased king were also compared to the harpoon in its sharpness and strength, and he had strong rigid metal bones.

The letter I (sic) in the word view: Wb,III,163(4)

¹⁰⁷Carrier , C., Textes Des Pyramides de L'Egypte Ancienne , IV,NT/F/S e inf 40-45, p. 2527.

¹⁰⁸ Allen , J.P., Pyramid Texts , N. 411 ;Faulkner , R.O., AEPT , p. 290 .

 $^{^{109}}$ PT682 (Pyr 2042c – 2043b).

¹¹⁰ And about writing the word in this way, ¬ wiew: Wb,III,363(2)

¹¹¹Carrier, C., Textes Des Pyramides de L'Egypte Ancienne, III,N/A/N 4-6, p. 1562.

¹¹²Faulkner, R.O., AEPT, p. 293.

When the king was revealed Akr's bones trembled (the earth shook hard due to his great strength).

In addition, the bones of the enemies formed food devoured by the king to exterminate and be resurrected as a victorious king in the hereafter.

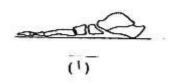
What the king hoped for most in the hereafter was that his voice is true, or he is deemed innocent and his bones are safe of any evil of any fractures.

Bone building and fixing was linked to many gods, as the deceased hoped his bones are purified like Osiris, and that he gets healthy bones like Horus. In addition, the roles of Tayt, Nut, Geb and Atum appeared in protecting the king and gathering his bones.

Bones are related to legends as On legend where the deceased rises with Atum and dusts a paved road in shu's bones.

In addition, there are indications to the Osirian legend in which the king is resurrected in the Osirian image so his bones become his food, and his illnesses are removed, and he gets protection that Osiris got on the day of bone-counting.





(Fig. 1)

- A) detailed drawing of the Flat Foot
- B) detailed drawing of the normal foot

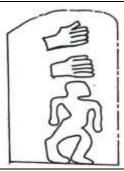
Rifaat, A.A., Amanuel of Surgery, Cairo, 1970, fig.621



(fig.2)

A statue well made of Bezelt for the so-called pr-ny-^cnhw dates back to 4th Dynasty found in Giza suffering from Dwarfism and Flat foot.

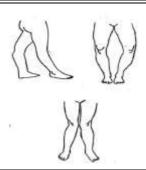
Hawas , Z., : The Statue of the Dwarf pr - ny - nhw Recently Discovered at Giza "MDAIK 47 , 1991, tafel 13.



(Fig. 3)

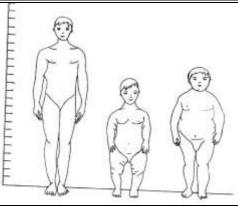
Painting of gypsum dating back to the 1st Dynasty reserved in the museum of Philadelphia University by no. (9949) depicting dwarf of achondroplasia also suffering from Rickets

Petrie, F., Royal Tombs of Earliest Dynastie, Vol.II, London, 1907, pl.26.



(Fig. 4)

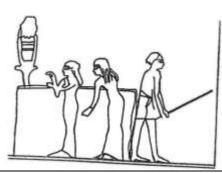
Detailed drawing of Genu Recurvatum and Genu Valgum disease Stedman, T.L., medical Dictionary, London, 1982, p. 582.



(Fig. 5)

Detailed drawing showing difference between height of a normal person and a dwarf

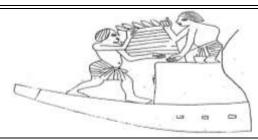
Dasen , V., Dwarfs in Ancient Egypt and Greece , Oxford , 1993 , fig. 1/1 .



(Fig. 6)

Mural from the tomb of Nkht on the western coast in Thebes depicting a girl suffering the absence of one arm.

Davies, N. de G., The Tomb of Nakht at Theban, New York, 1917, pl. 18



(Fig.7)

A mural depicting a man emptying the boat load and he seems humped. Rifaat , A.A., Princples and Practice or Surgery , Vol. I , Cairo , 1988 , p. 553 .



(Fig. 8)

A gypsum statue for the so-called pt - pn - nsw dating back to the 5th Dynasty found on a mastaba in Giza showing a man standing on a stone base.

Smith , W.S., A History of Egyptian Sculpture and Painting in the Old Kingdom , Boston , 1949 , pl. 25 (d)

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List of abbreviations

A	Analosta Oniontalia Dom			
Anor	Analecta Orientalia, Rom.			
BD	Budge,W., <i>Book of the Dead</i> ,3 vols.,London,			
	1910.			
BSAA	Bulletin de La Societé Archeologique d' Alexandrie			
CdE	Chroniqued'Égypte, Brüssel			
CT	De Buck, A., The Egyptian Coffin Texts , 7 vols. , Chicago			
	, 1935 – 1961			
ERT	Egyptian Religious Texts and Representations, New York.			
Faulkner	Faulkner, R.O., Ancient Egyptian Pyramid Texts, Oxford,			
AEPT	1969			
Gardiner,	Gardiner, A. H., Egyptian Grammar, Oxford, 1973.			
EG				
JNES	Journal of Near Eastern studies, Chicago.			
PT	Sethe.k., Die AltägyptischenPyramidentexte, 4 Bde,			
	Leipzig 1908-1922.			
Or	Orientalia, Commentarii Periodici Pontificii Instituti			
	Biblici , Rome .			
OXF.Ency	The Oxford Encyclopedia of Ancient, Cairo.			
VIO	Deutsche Akadamie der Wissenschaften zu Berlin,			
	veröffentlichungen des Instituts für Orientforschung ,			
	Berlin.			
WB.	Erman A. &Grapow H., Wörterbuch der Aegyptischen, 7			
	vols, Berlin , 1971.			
ZÄS	Zeitschrift für Ägyptische Sprache und Altertumskunde.			
	Leipzig, Berlin			