
Case of the Missing Nose

A hiányzó orr esete

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Initially submitted March 10, 2017; accepted for publication April 7, 2017

Abstract

The study of an ancient Egyptian mummified head with a prosthetic nose in the Anthropological Collection of the Hungarian Natural History Museum in Budapest, raised historical, cultural and medical questions. The cultural and legal implications of a missing nose is discussed from several points of view in various cultures. The article deals with the significance of the nose in ancient Egypt and elsewhere, the possible reasons of its lack, the history of rhinoplasty and reconstructive surgery concerning the nose and the prosthesis. Cases from ancient Egypt explained in the Smith papyrus (cases 11.-14.), in India described in the Susrata Samhita and later, and in Europe from the Middle Ages to modern history are reviewed.*

Keywords: nose, law, surgery, Egypt, India, Europe

Kulcsszavak: orr, törvény, sebészet, Egyiptom, India, Európa

Ancient Egypt is famous for its scientific and artistic achievements, which is reflected not only in written evidences, but also in the many artifacts they produced. Ancient Egyptians were once, however, living persons having pleasures and wishes as anybody nowadays. One of their most important desires was to reach a perfect afterlife. This aim was fulfilled by several funeral rites with the very core of mummification. Its method was continually improved from the Neolithic time, with a peak at the 21st Dynasty, but was modified unbroken until the Roman period, and survived even later.

The result can also be seen on the remains of the Gamhud people, whose tombs were first excavated by the mission of Philipp Back, a Hungarian merchant, living in Cairo and directing with his partner the Orosdi-Back commercial chain, later Omar Effendi stores. He started to excavate in Sharuna, Middle Egypt and then moved to Gamhud a few miles South in 1907.¹ After the division of the finds, he has sent most of the material of his part to the

*Internet sources were checked at 19th april 2017.

Hungarian National Museum, among them the mummies in their coffins. Later they were positioned in the Museum of Fine Arts in Budapest, where all the Egyptian coffins were open in 1936 and 1937 respectively, and the mummies taken out of the coffins were given to the Anthropological Section of the National Natural History Museum (called Anthropological Collection at that time), Budapest, where they were studied separately by Hungarian anthropologists. Together with the Gamhud mummies, unpacked still before the 2nd World War, there is a head published in the Egyptological journal, *Zeitschrift für Altägyptische Sprache und Altertumswissenschaften* in 1959.² It has a nose replaced (fig. 1-2.). This phenomenon lead us to the problem of the missing nose in ancient Egypt and later history of humanity.

I. The nose

The nose is a very important part of the human body – it is the outer extremity of the respiratory tract, it helps to smell, but it is also connected to attitudes and actions of people, as for instance in the English phrases: „lead someone by the nose” / to control someone completely, „pay through the nose” / to pay too much money, „put someone’s nose out of joint” / to offend someone’s feeling by taking his place in the love of others, „rub someone’s nose” / to punish someone by reminding him of his bad action, „turn up one’s nose at” / to consider something not god enough to do, „poke the nose around” / seeking cautiously for something, „under someone’s very nose” / at a place where it can be found easily. In Rome Marcus Tullius Cicero (106-43 BC) called it the protecting wall of the eye. – In 19th century Hungary people lead the phrase: „God let keep your nose, for if it is lost, what you can then put your glasses on?” on the above statement of Cicero.³ Of course, it was important for the ancient Egyptians, too, and they had such phrases, as for instance „*to act right is the breath for the nose*”⁴ or „*The breath of the poor man is his goods, the one who takes them from him, block up his nose.*”⁵

In different cultures the nose can have various meanings or symbolism. Some of them is collected in the above cited 19th century’s Hungarian encyclopedia entry: „The nose is the symbol of sexual vitality on one hand, and of the sound judgement from the other hand. It can also mean „life” because of its breathing function, and speaks about likes and dislikes, controls desires, and influences the right or defective work of community.”

Among the Siberian and Altaic hunting people the nose is the place of the spirit of the animal, and this is the reason, why they kept the nose of some animals (they hoped to get the protection of the house and home). The Finno-Ugrians put the skin of the nose of the killed

¹ See H. Győry, The story of the Gamhud cemetery, in: J-C. Goyon – Ch. Cardin (eds.), Proceedings of the Ninth International Congress of Egyptologists, OLA 150, Leuven 2007, 907-917. with further literature.

² Mérei Gyula - Nemeskéri János, Paleopathológiai vizsgálatok ó-egyiptomi múmiákon (Reserches paléopathologiques sur des momies Égyptiennes), *Anthropológiai Közlemények* I/3-4, 1958, p.81-84; Gyula Mérei - János Nemeskéri, Bericht über eine bei einer Mumie verwendete Nasenprothese, *ZÄS* 84, 1959, p.76-78. It is also mentioned by Andreas G Nerlich, Albert Zink, Ulrike Szeimies, Hjalmar G. Hagedorn (2000): Ancient Egyptian prosthesis in the big toe. *The Lancet* 356:2176-79. 2000. [https://doi.org/10.1016/s0140-6736\(00\)03507-8](https://doi.org/10.1016/s0140-6736(00)03507-8)

³ Aszalay József: *Szellemi omnibus* kéjutazásra az élet utain. Pest. 1855-1856, III. p. 150.

⁴ TAw pw n fnD jrt mAat (The complain of the peasant, B1,146.)

⁵ TAw pw n mAr jxt=f, dbb fnD=f pw nHm st (The Complain of the peasant, B1,232-234.)

bear on their face so that they get its sense of smell. In Tuwa, the nose of the bear is the talisman of the shamans.

In China, the nasolabial groove symbolises the sexual pleasures, as they considered the nose as a phallic- and the mouth as a vulva-symbol. The traditional name attached to white foreigners was „those with big nose”. In the Japanese tradition the arrogant and boasters have a long nose, while in Persia the same long nose is the sign of beauty.

The Bible connects the nose to the creation⁶, more specifically to life, which last „as long as I have life within me, the breath of God in my nostrils” (Job 27,3).

In the Western civilisations it has mostly phallic significance, and is the symbol of lust. The devil is usually drawn with big nose. The unusual size of nose, or its lack hindered the integration into society, the progress, and the harmonic relation of men to women, as represented in the works of Rostand’s *Cyrano* or *The Nose* by Gogol or *Tristram Shandy* by Sterne.⁷

People’s nose was not always as it is today. It has changed during the million of years of the history of the human race from the Paleolithic period onwards. Some forms are characteristic at certain sites and for certain anthropological groups, although they are not exclusively. The morphological diversity can appear also during the life of one person, as its shape modifies often while a person grows up. It is not obligatory, however, as for instance the children’s stub nose can stay in some cases practically unchanged for a life long period, giving the expression of childish charm and innocence. But it was not accepted positively by everybody, like for instance in the case of Socrates (c. 469-399), who was described in Plato’s (428/27-348/47 BC.)⁸ *Theaetetus* as having “a snub nose and projecting eyes”. It did not disturb him much, however, as is attested in a dialog cited by Xenophon:

„Critobulos: “Well, let that pass; but whose nose is finer, yours or mine?”

Socrates: “Mine, I consider, granting that Providence made us noses to smell with. For your nostrils look down toward the ground, but mine are wide open and turned outward so that I can catch scents from all about.”

Critobulos: “But how do you make a snub nose handsomer than a straight one?”

Socrates: “For the reason that it does not put a barricade between the eyes but allows them unobstructed vision of whatever they desire to see; whereas a high nose, as if in despite, has walled the eyes off one from the other.”⁹

In some cases the nose can grow at the wrong place¹⁰ or more often unproportionally large, as at Kings Rudolf I (1218-1291),¹¹ Ferdinand I. (1503-1564) or Miksa I =

⁶ „And the Lord God formed man from the dust of the ground and breathed into his nostrils the breath of life; and man became a living being.” (Genesis 2,7)

⁷ Pál József –Újvári Edith, Szimbólumtár, Budapest Balassi Kiadó 2001, „orr” in Hungarian.

⁸ His name describes a physical appearance: „wide, broad-browed”.

⁹ Xenophon, *Symposium*, Book 5, 6.

¹⁰ Bartholinus, Borellus and in the annales; based on Hubbell, Ronaldson, Luscha - Smith, Jarvis, Orvosi talányok enciklopédiája, trans. Kicsák Lóránt – Kaló Krisztina; Georges M. Gould-Walter L. Pyle, Anomáliák és különlegességek az orvostudományban. 1896, (repr. Eurodirect Service Kft, 1996), 257-258.

¹¹ Kaiserlich Königlich Allergnädigst – privilegierte Anzeigen aus sämmtlichen kaiserl. königl. Erbländen IV. Jahrgang, XXIII. Teil, 1774. Juni 8, 183 mentions a story, how he saved his life by the news, that some people wanted to shorten his long nose. Another story speaks about his bending the nose, to let someone pass by a cart (Aszalay József: Szellemi omnibus kéjutazásra az élet utain. Pest 1855-1856, III. 150-151.)

Maximilian II (1527-76), or poet Friedrich Schiller (1759-1805)¹², or composer Richard Wagner (1813-1883) etc. It can also have special shape as the hawk-nose, characteristic for Matthias rex (1443-1490) in Hungary or the Roman population, hence its other name, the Roman nose, or it can be formed in the special hook-nose on the representations of Hittite people. Again Egyptian monuments show a typical form for noses.

Beside anthropological differences, there are of course deformities due to broken bones. The media were full of such cases for instance in the middle of the 1920, when a certain Victor Mac Langlen appeared in the Fox films with a smashed nose. This fact helped him indeed to the roles of the martial and grim heroes, and he was unable to have it reshaped as long as he worked as an actor – the big story of 1927 was, that in a contract it was even stipulated, that „he has to wear it in the present shape”.¹³ The shape of the nose plays thus a very important role in the impression a face makes on you when looking at it for the first time. It can even determine the character of the face.¹⁴ Loosing it is thus a very grave problem for anybody it happens to.

II. The lack of nose can have various causes.

- It occurs as a birthdefect very rarely, but documents of cases are extant.¹⁵
- Trauma is, in contrary, a frequent reason. The usual type of accident is the fall to the ground, which causes abrasion of the nose, and other protruding parts of the head, but there are also particular cases. During the first world war the close combat often resulted in smashed faces, especially when the soldiers used the entrenching shovels as weapons in the confines of a trench. Different cases happen nowadays as for instance the unique accident in 2006, in Cape Town. Casey van Rooyen fall there into the glassdoor and found herself with missing nose. Fortunately, the cut part was also taken with her to the hospital where it was sewn back at once. After two more complicated operations her nose looks like it was originally, although the sutures remind her forever of the tragic event.¹⁶ There are other types of trauma resulting in the amputation of the nose – we have found reports of dog,¹⁷ horse¹⁸ or human¹⁹ bites

¹²Further examples are known also from the antiquity: Numa Pompilius (a 15,24 cm long nose), or Plutarkhos, Lycurgos and Solon. An example from the 19th c. is Thomas Wedders (or Wasdhouse) with a 19 cm long nose. (Orvosi talányok enciklopédiája (trans. Kicsák Lóránt – Kaló Krisztina) – Georges M. Gould - Walter L. Pyle, Anomáliák és különlegességek az orvostudományban 1896 alapján, (Eurodirect Service Kft, 1996), 257.) Descriptions of Ballonius, etc.

¹³„Mac Langlen orra”, Magyar Detektiv no. 18 / 11th year, 1th Sept, 1927, 40.

¹⁴Lombroso even described what type of nose has a „L'uomo delinquente”, the criminal.

¹⁵A case is described for instance by Maisonneuve. See in: Orvosi talányok enciklopédiája, 255-256.

¹⁶http://www.delmagyar.hu/szines-hirek/leszakadt_az_orra_de_nem_is_erezte/135863/

¹⁷<https://www.realself.com/question/dog-bite-nose>; Rui-feng C¹, Li-song H, Ji-bo Z, Li-qiu W., Emergency treatment on facial laceration of dog bite wounds with immediate primary closure: a prospective randomized trial study. *BMC Emerg Med.* 2013;13 Suppl 1:S2; <https://doi.org/10.1186/1471-227x-13-s1-s2>, Gurunluoglu R¹, Glasgow M, Arton J, Bronsert M., Retrospective analysis of facial dog bite injuries at a Level I trauma center in the Denver metro area. *J Trauma Acute Care Surg.* 2014 May;76(5):1294-300, <https://doi.org/10.1097/ta.000000000000185>; Ph.J. Miller, C. Hertler, G. Alexiades, T.A. Cook, Replantation of the Amputated Nose, *Arch. Otolaryngol. Head Neck Surg.* 124, Aug. 1998, 907-910. <https://doi.org/10.1001/archotol.124.8.907>

¹⁸N.S. Fuleihan, M.A.Y. Natout, R.C. Webster, N.A. Hariri, M.A. Samara, R.C. Smith, Succesful replantation of nose and auricle, *Otolaryngol Head Neck Surg.* 97, 1987, 18-23. <https://doi.org/10.1177/019459988709700104>

leading to the loss of the nose, but again serious burn, frostbite or traffic accidents may result in traumatic amputation.

- Fortunately, parallel to the development of medicine, a less frequent reason is illness, as in certain cases gangrene, Wegener's granulomatosis, Binder's syndrome, tumor²⁰, then some infections as necrotising fasciitis among others might make necessary to amputate the nose²¹. Earlier the list was headed by lues / syphilis²², lepra tuberosa, lupus and often the management of illnesses with mercury lead to loose a nose.

- Still a frequent reason to hospitalisation for nose reposition is fight or brutality. A fist or a boot in the face can break the nose, causing swelling of the soft tissues of the face and crepitation on palpation. More serious bone injuries are usually caused by hard objects as assailant, knuckle dusters etc. In earlier centuries also cut of the nose occurred fairly often in battle or quarrel while fighting with sharp instruments as sword or lance.²³ Then new guns brought new ways of injuring people, so fire-arm²⁴ can cause also not infrequently its loss. But loss of nose has happened unfortunately sometimes because of simple brutality or for threads of violence.²⁵

- For many centuries there was another major reason to cut somebody's nose, and intentionally: the law. Cutting the extremities of the body (*detruncatio membrorum*) as hand, ear or nose was a commonly used way in legislation in the antiquity and the middle age both in Asia²⁶ and Europe and also in Africa. It seems to be based first on the theory of the *talio* /

¹⁹ A case from 1743, in Ráckeresztúr: a furrier, called György Szűcs bite the tip of the nose of the butcher, and spit him with it, because he could not give him as much cow fur as he promised in their contact (Kállay István: Városi bírászkodás Magyarországon 1686-1848, Budapest: Osiris Kiadó 1996, 338); F.J. Stucker, G.Y. Shaw, S. Boyd, W.W. Shockley, Management of animal and human bites in the head and neck, Arch. Otolaryngol Head Neck Surg. 116, 1990, 789-793. <https://doi.org/10.1001/archotol.1990.01870070037006>

²⁰ Otto Ribáry, Az orr, a melléküregek és a fül daganatai, in: Dr. Besznyák István, A daganatok sebészete, Budapest 1986, 87-89.

²¹ Ch. Rob, R. Smith, Operative Surgery. Nose and Throat, Butterworths etc. 1986, 54-55. <https://doi.org/10.1136/pgmj.63.743.824-c>

²² Barton, Rhinoplasty in a syphilitic subject. Lancet 1876, i. 707. [https://doi.org/10.1016/s0140-6736\(02\)30054-0](https://doi.org/10.1016/s0140-6736(02)30054-0) The name was invented by Girolamo Fracastoro, a physician in Verona in 1530 based on the classical Roman story of Syphilus, who mocked the sun god Sol and was given for it a new type of sexual illness, not the tripper or gonorrhoea.

²³ A curious case in legislation in Britain (Suffolk) happened in 1722, when Sir John Crispe was attacked by Sir Edward Cook with a hedge bill and left for dead having a nose cut, but later recovered. The death penalty was issued on the base of intentional disfiguration, not on that of the intent to murder, as it was not considered to be felony. (Blackstone, William: Commentaries on the laws of England Repr. With suppl. Buffalo, New York: William S. Hein & Co., Inc. 1992, 206-206. First edition in Oxford: Clarendon Pr., 1765-1769)

²⁴ H. Burkle de la Camp, P. Rostock, Handbuch der Gesamten Unfallheilkunde II, Stuttgart: Ferdinand Enke Verlag 1963-1966, 168-169. For a case of a man of fifty, wounded during the siege of Alexandria in 1801 described by Ribes s. George M. Gould and Walter L. Pyle, Anomalies and Curiosities of Medicine, 1910, near the end of chapter 10.

(<http://www.worldwideschool.org/library/books/tech/medicine/anomaliesandcuriositiesofmedicine/chap10.html>)

²⁵ Aszalay József: Szellemi omnibus kéjutazásra az élet utain. Pest 1855-1856, vol. III. 115-116.

²⁶ For China s. Denis Twitchett, Michael Loewe: The Cambridge History of China, p. 50, 533. (Cambridge, Cambridge University Press, second edition, 2002) <https://doi.org/10.1017/CHOL9780521243278> called Yi in

lex talionis, that is the „eye for eye, tooth for tooth”. The *talio* means, that the same injury shall be inflicted to the person, accused to have made it. Its execution might lead to actual mutilations of the body of several persons in chain. Another cause of earlier mutilations was the punishment when a criminal was condemned for it – the different body members reflected the different crimes, thus the mutilation penalty reflected the crime itself. Additionally, physical punishment in the history often aimed not only to let suffer the criminals, but also to seal them with a well visible sign to hinder the melting of these persons into people living according to the law and to attract attention on their crime, thus serving as a warning example for others. The usual, relatively light judgement in these cases was the cutting of the nose, which could be payed off by goods in some cases.

A frequent cause for this judgement seems to be theft, and especially in cases of slaves and captives. So was it during the third Ur Dynasty in ancient Sumer, where the cutting of the nose seems to happen quite often. Anyway, it could be payed off according to the Ur-Nammu (ca. 2112-2095 BC) Codex.²⁷ In Rome the XII tables law speaks also this way,²⁸ and Charlemagne in 779 AD. ordered in the same sense, that first the eyes, than the nose, for the third time, however, life shall be taken from a robber – if he cannot pay himself off.²⁹ In ancient Egypt, an additional punishment of people accused with theft from sacred area could it be – as cases are reported from the 20th Dynasty tomb robberies in Thebes, or for the assistance in the Conspiracy of the Harem during the reign of Ramses III. But there is no sign of the possibility of paying it off.³⁰

Later law punished also the crime of forgery when offending private property, with the cutting of the nose. In the 18th century Britain it was at least among the acts, it inflicted.³¹

Parrallel to the diffusion of tobacco, its smoking was prohibited and penalised – in middle age Russia – by banishment and cutting the nose. The aim being stated as to never be able again to let the smoke out. Later, in 1623 the law was a bit mitigated, but still said to split the smoker’s nose.³²

the Five Punishments of Slaves, done without an anesthetic, until the reign of Han Wendi (180-157. BC) of the the Western Han Dynasty. For the Koran s. „Life for life, eye for eye, nose for nose, ear for ear, tooth for tooth, and for injuries (similarly).” (5:45).

²⁷ Codex Ur-Nammu (nach R. Haase, Die keilschriftlichen Rechtssammlungen in deutscher Fassung, 1979, § 17: „Wenn jemand die Nase eines anderen Mannes mit einem Messer abgeschnitten hat, zählt er 2/3 Minen Silber.” https://doi.org/10.1163/2211-436x_cos_acosb_2_138a

²⁸ In Rome the XII table law speaks so too: „If he (i.e. the accused) broke a member of someone, and cannot make peace with him, he shall got the same.” - „Si membrum rupsit, ni cum eo pacit, talio esto.”

²⁹ Cap. 23: De latronibus ita precipimus observandum, ut primo vice non moriatur, sed oculus perdat, de secunda vero culpa nasus ipsius latronis abscidatur; de tertia vero culpa, si non emendaverit, moriatur. The Code Pénal applied the cutting a nose as a penalty still during the reign of Louis XIV, c. 1670. (Both Ödön: Fejezetek a nyugat-európai állam- és jogtörténet köréből [Chapters from the History of Western-European State and Law], JATEPress, 1996, 80.

³⁰ Oxford Encyclopedia of ancient Egypt, Oxford 2001, vol. I.: Crime and Punishment, vol. II. Law: 315-320; vol. III. Tomb Robbery Papyrus. <https://doi.org/10.1093/acref/9780195102345.001.0001>

³¹ „punished by a forfeiture to the party grieved of double costs and damages; by standing in the pillory, and having both his ears cut off, and his nostrils slit, and seared” (statute 5 Eliz. c. 14, see Blackstone, William, Commentaries on the laws of England Repr. With suppl. Buffalo, New York: William S. Hein & Co., Inc. 1992, 245-246. First edition in Oxford: Clarendon Pr., 1765-1769.) <https://doi.org/10.2139/ssrn.2296451>

³² Minárovics János, A dohányzási tilalom története [The History of banning the smoking], BM Tűzoltóság Országos Parancsnoksága, Budapest 1999, 13.

In the 15th-16th century Europe cutting the nose was the usual penalty for adultery, and it appeared sporadically still into the 20th century. The first occurrence seems, however, to be much earlier, as in the 11th century in Naples the women, who seduced a married man, were sentenced to have cut nose.³³ Ferencz Baráth quotes a source from Sevilla, where a third time punishment for being at the brothel is the cutting of a nose.³⁴ In strictly traditional Roma communities the infidel wife was punished by getting a nose cut still in the beginning of the 20th century.³⁵

In Hungary this type of punishment was used mainly for stealing and adultery.³⁶ Stefanus rex (997-1038), the first king of Hungary ordered in his II. decree, §.VI. that the nose of the slave should be cut if he can not pay five steers and give back the stolen items,³⁷ in case it happened the first time. (For the second time the same happened with his ears, and the third time the judgement was the death sentence.) He is also using the *talio* in §.XII. for the nose.³⁸ Ladislaus II (1077-1095), decreed also the judge if he did not let fulfil the nose-cutting judgement – his wealth shall be taken and he himself shall become a slave.³⁹ The mutilation law was restricted only in 1405 by king Sigismundus (1387-1437), so that only the royal court was allowed to sentence and realise this type of penalty.⁴⁰ Although the law in the

³³ Dr. Schreiber Emil: A prostitúció [The Prostitution] (Pátria Irodalmi Vállalat és Nyomdai Részvénytársaság; Rendőrségi Szaktanfolyamok Kiadványai, 1917, 28.

³⁴ Baráth Ferencz: A prostitúció s befolyása egészségi állapotra angol forrás után [The Prostitution and its Effect on the Health Conditions based on an English source.] Revision 1872, Pest, Athenaeum, 82-83.

³⁵ Székely András, A szerelem krónikája, avagy az erotika kultúrtörténete [The Chronicle of Love or the Cultural History of Erotics]. Budapest: Officina Nova 1988, 103.

³⁶ For further details see Béli Gábor: Magyar jogtörténet. A tradicionális jog [Hungarian Legal History. The Traditional Law]. Budapest – Pécs: Dialóg Campus Kiadó 1999, 207-208, or <https://1000ev.hu/index.php?a=1&k=1>. For the collection of laws in Latin: Závodszky Levente, A Szent István, Szent László és Kálmán korabeli törvények és zsinati határozatok forrásai (Függelék: A törvények szövege), [Sources of the Laws of the time of St. Stefanus, St. Ladislaus, Colomannus and sources of the resolutions in synods. Appendix: The texts of the Laws.] Budapest 1904. See http://jmvk.compunet.hu/szoveg/kiadvany_new/szentistvan.htm.

³⁷ VI. De furto servorum: Si quis servorum semel furtum commiserit, reddat furtum et componat nasum V iuvenis, si potest, sin autem abscidatur. Si absciso naso iterum commiserit furtum, componat aures V iuvenis, si potest, sin autem abscidantur. Si idem tercio furtum commiserit, careat vita. (Corp. Jur. II. 39, 40.) Hamza Gábor, Szent István törvényei és Európa. In: Sanctus Stephanus et Europa. Szerk. Hamza Gábor. Bp., 1991. Similarly in the *S. Ladislai lex II. caput 2*, but even more severe, as he was condemned to death already for the second time – exemption was, however given, when he got in ecclesiastical asylum: *De furto servi*. Si servus fur inventus fuerit et non possit pretio commutari, nasus ejus, nisi ceciderit in ecclesiam vel in curiam regis vel ad pedes episcopi, abscidantur. Et, si ceciderit, careat custos ejus vendicatione furti. §. 1. Si vero secundo hoc modo captus fuerit, suspendatur. In another (10th) caput the decree says: Si quis ergo servum suum, vel in furto proprio, sive aliorum, culpabilem invenerit, praefato testante eloquio, iudicibus ut parcat ad incidendum largiri nasum. Again in 14th caput the same cutting of the nose is attested: §. 1. Servus autem si tale furtum fecerit, reddat duplum et nasum amittat.

³⁸ De naso absciso. Si quis alii nasum absciderit, medietatem pretii ipsius componat, ut supra. (*S. Stephani lex II. caput 13.*)

³⁹ *S. Ladislai lex II. caput 6*. Si iudex nasum servi non incidit vel liberum non suspendit, pereant omnia sua, praeter filios filiasve; et ipse iudex venundetur.

⁴⁰ *Mutilationes membrorum prohibentur: exceptis, quibus facultas a rege facta est*. §. 1. Nisi hi solummodo, quibus per nos potestas nostra regia rite fuerit attributa. (Sigismundi Decretum Tertium. Sigismundi decr. II. anni 1405. (III.) articulus 3.)

Tripartitum (1514-1845) has completely prohibited its application,⁴¹ mutilations regularly occurred still among later Hungarian punishments according to the *Praxis Criminalis*, where several types of it were described detailed.⁴² Although the cutting the nose was usually applied for theft and adultery,⁴³ István Báthory (1571-1586) used it in his order for the punishment of rebellion.⁴⁴

The case in ancient Egypt was similar and different at the same time. Crime⁴⁵ in ancient Egypt meant action against *maat*, the created world-order, personified in the goddess Maat, the maintain of which was the most important task of the pharaoh. Penalty thus meant to re-create the *maat*, and pacify the god / goddess hurt. No Code of Penalty seems to have been written in Egypt, but cases were discussed in several papyri, lead scrolls and stela, or in the stories of contemporary foreign visitors.⁴⁶

In judgement the principle of *talio*⁴⁷ and the principle of mirroring⁴⁸ was achieved. As the nose was a substitute for the sexual organ,⁴⁹ also connected to pleasures (the determinative of the words as rS, rSw, rSwt, xntS, tfn, dfn etc. were the nose), its cutting was thus a proper punishment for adultery, as it is attested in a case in Deir el Medineh (pDeM 27).

Again a task of the nose is the smelling. A common moment in ancient Egyptian funeral scenes is the lotus flower, in front of the nose of the deceased. He took in the scent of the rebirth by it. All gods had marvellous scent around them, while the bad creatures stinked. Without having a nose who could smell their presence? Thus stealing of cattle from a temple property inflicted the cutting of nose, rightly depriving the guilty one to be able to feel the god's presence.⁵⁰

But the most important function of the nose is breathing. The healthy men can say about himself „*The breathing-air (TAw) is in my nose, the semen is in my phallos*” (Pyr 1061b), and breath is again given by gods, thus „*the air of life is at the nose*” (CG 20164). On top of all, the god of creation, Atum was created himself through the breath of the nose of Shu, god of air and space (CT I. 338b), or a name for Thot is „*the one with a nose*” (fnDj / Pyr 1305c). Not surprising then, that among additional punishments for rebels the cutting of

⁴¹Tripartitum. I. 14. 15. §, and III: 20, also the law 1495: 4. §. 14. (Béli Gábor: Magyar jogtörténet. A tradicionális jog. Dialóg Campus Kiadó, Budapest – Pécs, 1999, 160.)

⁴²Csizmadia Andor – Kovács Kálmán – Asztalos László: Magyar állam- és jogtörténet, Budapest: Tankönyvkiadó 1972, 315.

⁴³In 1609, Gömör county, Corpus Statutorum, II/1.74.

⁴⁴„Kolozsvárott a székelyek közül, akik az összeesküvés fejei voltak, több mint harmincnyeknek orrát és fülét levágták, hogy okulásul szolgáljanak az utókornak.” (Barna Attila: A politikai bűncselekmények büntetésének szimbolikája, in: Mezey Barna(ed.): Jogi kultúra, processzusok, rituálék és szimbólumok. Budapest: Gondolat Könyvkiadó 2006, 18.)

⁴⁵See Winfried Barta, Strafen, LÄ VI, 68-71.

⁴⁶E.g. Hrd. II. 111 – punishment for adultery (story of pharaoh Pheros), or Diod. I. 83 – judgement for killing a cat.

⁴⁷Diod. I. 78.

⁴⁸pSalt 124 – cutting the hand for stealing; Louvre AF 1577,3-6 – cutting the tongue for perjury.

⁴⁹Edel, Elmar, Beiträge zum ägyptischen Lexikon, ZÄS 79, 1954, 88. https://doi.org/10.1163/2452-3054_dnp06_com_00197

⁵⁰pAbbot 5,6-7, cf. cf. F. Ll. Griffith, The Abydos Decree of Seti I at Nauri, JEA 13, 1927, 193-206. <https://doi.org/10.2307/3853959>

nose and ears⁵¹ are quite frequent. This way, also the mutilation of a statue was fulfilled indeed, when his nose was cut. According their notion, the further existence of the person it represented, was completely hindered. Even the death sentence could be expressed with the help of the nose, by the phrase that the air is taken from the nose (Pyr 291b). And in contrary, „get breath in need” meant to get free, to be saved, to receive pardon. (Wb V, 352.)

III. Surgery of the injured or missing nose⁵²

As known from the works of Galenos (129-199 AD), the surgeons performed plastic operations for ages in Egypt and India. Antyllus (2nd or 3rd. c. AD – quoted by Oribasius, c. 320-400 AD) and Paulus Aegineta (625-690 AD) speak again about well developed rhinoplasty in these two ancient countries.

Ancient Egyptian nasal surgery

And indeed, from Egypt there are several descriptions of surgical operations extant, among them some concerning the nose. Namely the pSmith's (composed in the Middle Kingdom, but originating from the 18th Dynasty) chapters 11-14⁵³ are dealing with nasal surgery, and among the four cases of the nose, also reshaping is present. The injuries might be originated after a fall to the ground or as the impact of a foreign body (as e.g. fist, boot or a hard object). Most exactly the 11th case of the Smith papyrus is dealing with „the pillar of the nose” (jwn n fnD, probably *Septum and lateral cartilages*), while case 12th with „the chamber of the nose” (Stjjt n fnD, probably *dorsum*), where reposition is also an important moment in the wound management. In both cases a piece of cloth shall be put into the nostrils to keep its shape, and ointment is administered on the surface.

CASE 11. A FRACTURE OF THE PILLAR OF THE NOSE (5,10-15)

Practices for a fracture in the pillar of his nose.

If you treat a man for a fracture in the pillar of his nose, and his nose is flattened and his face is flattened out, while the swelling that is on it is high, and he has bled from his nostrils, then you say about him: "One who has a fracture in the pillar of his nose: an ailment I will handle."

You have to wipe it for him with two plugs of cloth. You have to push two plugs of cloth wet with oil inside his nostrils. You have to put him on his bed in order to reduce his swelling. You have to set for him stiff rolls of cloth so that his nose is restricted from moving, and treat him afterward with an oil and honey dressing every day until he gets well.

As for „the pillar of his nose” it is the bridge and side of his nose, inside his nose in the middle of his nostrils.

⁵¹The strong connection between the two organs in ancient Egyptian mind is attested by the pEbers 859g = pBerlin 3038, §163g, where the „breath of life” enters the right ear, while the breath of death enters the left ear.

⁵²Érczy Miklós, Zoltán János, *Plasztikai sebészet és műtétan* [Plastic Surgery and Operation]. Budapest: Egészségügyi Kiadó 1954, 15-18.

⁵³ Translated by James P. Allen, *The Art of Medicine in Ancient Egypt*, The Metropolitan Museum of Art, New York 2005, 80-83. <https://doi.org/10.5479/sil.123365.39088002644706>

As for „his nostrils” they are the two sides of his nose, penetrating to his cheek, starting at the end of his nose and exiting the top of his nose.

CASE 12. A FRACTURE OF THE NASAL BONE (5,16-6,3)

Practices for a fracture in the chamber of his nose.

If you treat a man for a fracture in the chamber of his nose and you find his nose crooked and his face flattened, while the swelling that is on it is high, then you say about him: “One who has a fracture in the chamber of his nose: an ailment I will handle.”

Set it back in its proper place. Wipe for him the inside of his nostrils with two strips of cloth until every eel of blood that is knotted inside his nostrils comes out. Afterward, you have to push two plugs of cloth wet with oil into his nostrils. You have to set for him two stiff rolls of cloth bandaged on it and treat (him) with an oil and honey dressing every day until he gets well.

As for „a fracture in the chamber of his nose” it is the middle part of his nose down to where it ends between his eyebrows.

As for „his nose crooked and his face flattened” it means that his nose is awry and very swollen all over, and his cheeks likewise, so his face is flattened out from it and is not in its right form, because every sinus is distorted with swelling, so his face looks flattened from it.

As for „every eel of blood that is knotted inside his nostrils” it is the coagulated blood inside his nostrils, similar to the eel that exists in the water.

Case 13th describes a fracture in the maxilla (or even more serious basal skull fracture) based on the state of the nose which can not be cured by the physicians at that time:

CASE 13. A FRACTURE OF ONE SIDE OF THE NOSE (6,4-7) .

Practices for a fracture in his nose.

If you treat a man for a fracture in his nose, you have to put your hand on his nose in the area of that fracture. Should it wiggle under your fingers, while he also bleeds from his nostril and from his ear near that fracture, and it is hard for him to open his mouth from it, and he is dazed, then you say about him: “One who has a fracture in his nose: an ailment for which nothing is done.”

Case 14th gives instructions for a cut in the nose wing. As it is an open wound, fresh animal meat is prescribed for the first day which is followed again by the ointment:⁵⁴

CASE 14. A FLESH WOUND IN THE NOSE (6,7-14)

Practices for a wound in his nose.

If you treat a man for a wound in his nostril, which is obstructive, and if you find the tips of that wound shifted from each other, you have to fasten that wound for him with stitches. Then you say about him: „One who has a wound in his nose, which is obstructive: an ailment I will handle.”

⁵⁴All the four cases were analysed also from clinical point of view by A. Brawanski, Mittelgesichtsverletzungen im Pap. Smith, Fälle (9-14), SAK 35, 2006, 49-60.

You have to make for him two swabs of cloth. You have to wipe every eel of blood that is knotted inside his nostril. You have to bandage him with fresh meat the first day. If his stitches loosen after you have taken away the fresh meat from it, you have to bandage him with an oil and honey dressing every day until he gets well.

As for „a wound in his nostril, which is obstructive”, it means that the tips of his wound are flabby and open to the inside of his nose as well, the flabbiness forming an obstruction.

Unfortunately we do not have later descriptions of similar cases, thus later state of nasal operations are still unknown. Anyway, the knowledge of the Egyptians was partly transmitted through Persia and Arabia or through the Alexandrian medical schools to Greece and Italy, and later to other parts of Europe.⁵⁵ Different seems to be the case with India.

Indian nasal surgery

The first surgical attempts at nasal reconstruction are reported here from c. 1500 BC, done by brickmakers and potters. Later, in the *Susrata Samhita* (c. 600 BC), the „Chronicle” of Susruta, „the famous”, who is often called the forefather of Indian surgery because of the many operations he described in this work, there is a section dealing with nasal reconstruction describing a cheek flap, using a leaf as a template as follows:

„When a man's nose has been cut off or destroyed, the physician takes the leaf of a plant which is the size of the destroyed parts. He places it on the patient's cheek and cuts out of this cheek a piece of skin of the same size (but in such a manner that the skin at one end remains attached to the cheek). Then he freshens with his scalpel the edges of the stump of the nose and wraps the piece of skin from the cheek carefully all around it, and sews it at the edges. Then he places two thin pipes in the nose where the nostrils should go, to facilitate breathing and to prevent the sewn skin from collapsing. There after he strews powder of sapan wood, liquorice-root, and barberry on it and covers with cotton. As soon as the skin has grown together with the nose, he cuts through the connection with the cheek.”⁵⁶

They developed, however, another method, too. The so called Indian Flap or torsion flap method means namely a direct flap cut at the forehead and root of the nose with its pedicle at the height of the arch of the eyebrow which is then turned about 180 grade on to nose. It seems to be less older, as we hear about it only around 1000 AD in Kangra (near Delhi), where its technique was the family secret of the Kanghiara family. The method arrived to England during the war with Tipu Sultan (1769-1799), who let cut off the right arm and the nose of 4 Indian soldiers and a bullock cart driver, named Kawasjee, serving for the British army. When arrived back to his army, Kawasjee was operated with success by Maratha Vaida, the potter, in the presence of the English physicians Thomas Cruso and James Findlay. The case was soon reported and illustrated with a photo in Britain. The first English result with the same method was published in 1816 by the London surgeon, Joseph

⁵⁵ see also Remensnyder J. P., Bigelow M. E., Goldwyn R. M., Justinian II and Carmagnola: a Byzantine rhinoplasty?, *Plast Reconstr Surg.* 1979 Jan; 63(1):19-25. <https://doi.org/10.1097/00006534-197901000-00004>

⁵⁶G. Singh – M. Kelly, Origins of the „Indian Method” of nasal reconstruction, *Plastic and Reconstructive Surgery*, Sept. 2005, 116 (4), 1175-1176. <https://doi.org/10.1097/01.prs.0000183387.00468.52>

Constantine Carpue (1764-1846),⁵⁷ who built a nose of an army officer, who had lost it by mercury poisoning. The method was improved by several later physicians.⁵⁸

Western nasal surgery

The Branca (Sicily) and Vianea (Calabry) medical families were interested in supplying the lack of nose in the 15th century Europe. They used a specific method, called „Italian” invented by Antonio Branca, and described by Gasparo Tagliacozzi (1545-1599) in „*De Chirurgia Curtorum per Insitionem*” in 1597 (published in Venezia).⁵⁹ Again in 1646, there is a report of similar successful nose reconstruction, this time by Griffon, a German surgeon in Lausanne.⁶⁰

A further development was the introduction of the wandering flap – that is the flap taken from the upper arm, which was twice transplanted for the first time by Karl Ferdinand von Gräfe (1787-1840, published in 1818), and his successor, Johann Friedrich Dieffenbach (1792-1847) in the Berlin hospital Charité. A double flap plasty got developed, which replaced both skin- and mycosal defects. By this method he counterbalanced the local flap shrinkage. Later, in 1887 the internal incision was pioneered by John Orlando Roe (1848–1915) and his colleagues. Then Jacques Joseph (1865-1934) published his first report on the simultaneous, intranasal approach for the surgery of a hump nose with the correction of the front nasal septum (built from the pedicle) in 1904. This and other new methods on the various fields of plastic surgery resulted in publishing the final version of his book on the corrective surgery (1931), representing a milestone in plastic surgery,⁶¹ which developed, however, enormously since then with new methods for the tissue transfer suitable for the reposition of the missing part of the nose.

Another line of new way of plastic surgery was entered by Antoine François Jenin de Montègre (1779-1818) in 1817, when he described a mystic „older Indian method” by free flap. The first actual free flap transplantation was reported in 1822, managed by Christian Heinrich Büniger (1782-1842), who repaired nasal defects by using full-thickness skin grafts

⁵⁷ Detlef Rüster, *Alte Chirurgie. Legende und Wirklichkeit*, Berlin: Volk und Gesundheit 1985, 49; Hamilton, J. B., *Rhinoplasty: Indian method*, J. Am. M. Ass. 1887, ix, 752.

<https://doi.org/10.1001/jama.1887.02400230016003>

⁵⁸ As e.g. [Hauben D.J.](#), Ernst Blasius's contributions to plastic surgery. *Plast Reconstr Surg.* 1984 Oct; 74 (4):561-70; <https://doi.org/10.1097/00006534-198410000-00020>, Richardson G. S – Hanna D. C. – Gaisford J. C, Midline forehead flap nasal reconstruction in patients with low browlines, *Plastic and Reconstructive Surgery* 49/2, 1972, 130-133. <https://doi.org/10.1097/00006534-197202000-00003>

⁵⁹ [Micali G.](#), The Italian contribution to plastic surgery. *Ann Plast Surg.* 1993 Dec;31(6):566-71, <https://doi.org/10.1097/0000637-199312000-00019>; Frank, I., Gasparo Tagliacozzi and his contribution to rhinoplasty, *Ann. Otol., Rhinol. & Laryngol.* 1918, xxvii, 505-527. <https://doi.org/10.1177/000348941802700207>, For pictures: Rüster D., *Alte Chirurgie*, 142.

⁶⁰ In his book, *Opera quae exstant omnia*, W. Fabry von Hilden, recounts this reconstruction from 1590, the technique of which he learned from a travelling Italian surgeon – using a flap of skin from the arm. The patient, a beautiful virgin, reportedly cut off her nose to prevent herself from being raped by a band of soldiers. s. <http://www.cosmeticsurgeryspecialists.org/history.html> (by Peter A. Aldea, M.D. - Patricia L. Eby, M.D.)

⁶¹ Jaques Joseph, *Nasal Plastic Surgery and Other Facial Reconstructive Procedures, With an Appendix on Reconstructive Breast Surgery and Some Other Procedures in the Area of External Plastic Surgery. An Atlas and Text Book.* – other significant work e.g. J. Joseph, *Korrektive Nasen-, Ohrenplastik, Handbuch der speziellen Chirurgie des Ohres und der oberen Luftwege*, Würzburg: Verlag von Kurt Kabitsch, 1912, Bd. I.2, 258.

from the patient's thigh.⁶² Later on Karl Thiersch (1822-1895) introduced split-skin grafting in 1874. This method was applied by many other colleagues with modifications and improvements to various parts of the body. Michel Serre (1799-1840)⁶³ and Auguste Nélaton (1807-1873) developed again another method where the soft parts of the nose were supplied by two diamond-shaped flaps of skin. Also the bridge flap, invented by Nicholas Senn (1844-1908), was adapted for nose by Georg Clemens Perthes (1869-1927). There were, however, some important further modifications, invented by other surgeons as Bernhard Bardenheuer (1839-1913)⁶⁴, Curt Theodor Schimmelbusch (1860-1895)⁶⁵ or Erich Lexer (1867 - 1937)^{66, 67}.

⁶² C. Bünger, Gelungener Versuch einer Nasenbildung aus einem völlig getrennten Hautstück aus dem Beine, J. d. Chir. u. Augenh. 1822(iv) 569-582; Davis J. S., The Story of Plastic Surgery. Ann Surg 1941(113) 641-656, <https://doi.org/10.1097/0000658-194105000-00001>; Chick LR. Brief History and Biology of Skin Grafting. Ann Plast Surg 1988; 21(4):358-365. <https://doi.org/10.1097/0000637-198810000-00011>

⁶³ Serre, Michel. Traité sur l'art de restaurer les difformités de la face, selon la méthode par déplacement, ou méthode française. Montpellier: L. Castel, Paris: Baillière, 1842.

⁶⁴ „In 1898 Bardenheuer performed a method of Indian rhinoplasty. The flap was based over the right supraorbital vessels, extended superiorly beyond the hairline on the forehead, and dipped down into the other side of the forehead forming an arc that included almost all of the forehead.” (<http://www.whonamedit.com/doctor.cfm/3165.html>)

⁶⁵ Crumley, Roger M. D., Turn of the Century Facial Plastic Surgeons and The Laryngoscope. A Century of Progress, Laryngoscope. 106(10):1199-1203, October 1996, <https://doi.org/10.1097/00005537-199610000-00003>; A. Galli, P. Berrino, P. L. Santi, M. Adami, A systematic approach to primary closure of the donor site following transposition of vertical forehead flaps, European Journal of Plastic Surgery, Springer Berlin / Heidelberg, Volume 13, Number 3 / May, 1990. <https://doi.org/10.1007/bf02273867>

⁶⁶ „In Freiburg entwickelte Lexer seine in Jena und vor allem in Königsberg erlernten Methoden, sowie Techniken der plastischen und Wiederherstellungschirurgie, weiter. Besonders widmete er sich der Rekonstruktion von Nase, Ohr, Mund und Kiefer, den Mammoplastiken und ihren Modifikationen, sowie den Gesichtsplastiken und den Gaumenspaltenoperationen” in 1919-1928. (http://de.wikipedia.org/wiki/Erich_Lexer)

⁶⁷ Some articles: Aymard, J. L., Nasal reconstruction, Lancet 1917(ii) 888-892, [https://doi.org/10.1016/s0140-6736\(00\)54062-8](https://doi.org/10.1016/s0140-6736(00)54062-8); Babbitt, J. A., The reconstruction of the nasal septum after the submucous operation, J. Am. Med. Ass. 1914(63) 1822-1827, <https://doi.org/10.1001/jama.1914.02570210024007>; Balás, D., Teljes orrképzés esete, Orv. Hetil., Budapest 1905 (49) 79. = Pest. med.-chir. Presse, 1905(41) 158; Bartlet, J. H. , Foreign body in nasal cavity; removal and subsequent rhinoplasty, Brit. Med. J. 1870(ii) 704, <https://doi.org/10.1136/bmj.2.522.704>; Begg, J.R., Idiopathic gangrene of the four extremities, nose and ears; amputation of the extremities; recovery, Lancet 1870(ii) 397-399., [https://doi.org/10.1016/s0140-6736\(02\)79831-0](https://doi.org/10.1016/s0140-6736(02)79831-0); Behrend, M., Rhinoplasty to replace a nose bitten off by a rat, J. Am. Med. Ass. 1921(76) 1752, <https://doi.org/10.1001/jama.1921.92630150005011d>; Binnie, F., Rhinoplasty for sunken nose, Ann. Surg. 1908. 67. 1059. – cf. Surg. Gynec. Obst. Chicago, 1908. 6. 599.; Blair, V. P., Rhinoplasty, with special reference to saddle nose, J. Am. Med. Ass. 1921(77) 1479-1482, <https://doi.org/10.1001/jama.1921.02630450021007>; Buchanan, G., Rhinoplasty from the forehead; the periosteum included in the flap, Lancet 1865(ii) 148; Carter, W. W., A case showing restoration of the entire nose by rhinoplasty and bone transplantation, J. Am. Med. Ass. 1913(60) 728-730., <https://doi.org/10.1001/jama.1913.04340100020008>; Cohen, L., Corrective rhinoplasty, Ann. Otol. Rhinol. Laryngol. 1914(23) 924-928. = Laryngol. (St. Louis), 1914(24) 565-586. <https://doi.org/10.1288/00005537-191406000-00001>; Cohen, L., Further observations in correct rhinoplasty, Surg. Gynec. Obst. 1920(31) 412-415.; Cohen, L., Corrective rhinoplasty; some anatomico-surgical considerations, Surg. Gynec. Obst. 1922(36) 794-799.; Cohen, L., Corrective rhinoplasty; some reasons for faulty results, Surg. Gynec. Obst. 1924-25(33) 342-350., <https://doi.org/10.1177/000348942403300203>; Erichsen, J. , Rhinoplasty; successful result, Lancet 61, No.1548, 30 April 1853, 407-408, [https://doi.org/10.1016/s0140-6736\(02\)68772-0](https://doi.org/10.1016/s0140-6736(02)68772-0); Finney, J. M. T., Rhinoplasty by means of one of the fingers; a report of a new method, Surg. Gynec. Obst. 1907(5) 23-26; Hevesi, I., Rhinoplastica gyógyult esete, Orv. Hetil., Budapest 1905(49) 506.; Ivanishevich, O., A new method for rhinoplasty. Surg. Gynec. Obst. 1924(38) 828.; Johnston, R. H., Total rhinoplasty; a case report, Am. J. Surg. 1915(29) 149-151.

A summary and description of these further new methods were published in 1916 by Erich Lexer.

Extraordinary experiments were also undertaken even in America. There is a case reported this way: „About 1892 Dr. J. P. Parker then of Kansas City, Mo., restored the missing bridge of a patient's nose by laying the sunken part open in two long flaps, denuding the distal extremity of the little finger of the patient's right hand of nail, flesh, tendons, etc., and binding it into the wound of the nose until firm union had taken place. The finger was then amputated at the second joint and the plastic operation completed with a result pleasing both to patient and operator.”

The First World War started a new chapter in the plastic surgery again, with the first revolutionary novelty already in 1917 by Vladimir Petrovich Filatov (Ukraine, 1875-1956), who managed to create skin transplantation through round pedicle flap. He first applied this new technique in 1916 for supplying the eyelid,⁶⁸ and published the tubed pedicle flap method the next year in the Russian ophthalmological journal. It was soon practiced by other physicians, so by the above mentioned Jacques Joseph⁶⁹, Hugo Ganzer and Victor Morax, other pioneers of tubed flap,⁷⁰ and further improved⁷¹. The technique was popularized and substantially developed, however, by Harold Delf Gillies. He managed to persuade the British Army to establish a hospital at Sidcup dealing only with facial plastic surgery, during the First World War. His first tubed pedicle flap operation was performed in October 1917, and he achieved a series of similar operations in the following period – with his team he performed c.

<https://doi.org/10.1097/00007611-191509010-00044>; Liston, R., Reunion of divided parts; reconstruction of the nose, *Lancet* 1834-5(ii) 40-43.; Keegan, D. F., Rhinoplasty, *Lancet* 1891(i) 419-422.

[https://doi.org/10.1016/s0140-6736\(02\)17935-9](https://doi.org/10.1016/s0140-6736(02)17935-9); McGraw, T. A., The use of the finger in rhinoplasty, *Surg. Gynec. Obst.* 1910(11) 557-562.; McWilliams, C. A., Rhinoplasty by finger, *Ann. Surg.* 1913(58) 408-411, <https://doi.org/10.1001/jama.1913.04340100022009>; McWilliams, C. A., Complete rhinoplasty by cartilage transplant and pedicled temporal forehead flap, 1923(77) 116; McWilliams, C. A., Dunning, H. S., Rhinoplasty and cheek, chin, and lip plastic with tubed, temporal-pedicled, forehead flaps, *Surg. Gynec. Obst.* 1923(36) 1-10.; Moure, E. J., Contribution to the study of rhinoplasty, *Ann. Otol. Rhinol. Laryngol.* 1918(27) 1272-1281 <https://doi.org/10.1177/000348941802700410>.; Müller, E.: Az orr, az alsó szemhéj's a pofa rákja; kürtás; rhinoplastica. *Gyógyászat* 1881(20) 289-293.; Navratil, I., Rhinoplastica sclerománál, *Orv. Hetil.* 1898(xlii) 71; New, G. B., Reconstruction of upper lip and portion of nose, *Surg. Clin. N. America* 1929(9) 75-8; Pólya, J., Orrplastikák, *Orv. Hetil.* 1904(xlviii), 436; Pratt, F. J., Pratt, J. A., Intranasal reconstruction, *Ann. Otol., Rhinol. & Laryngol.* 1922-1923(xxxi) 46-106, <https://doi.org/10.1177/000348942203100102>; Roberts, J. B., Suggestions for the reconstruction of syphilitic noses, *J. Am. M. Ass.* 1901(xxxvi) 1017-1019, <https://doi.org/10.1001/jama.1901.52470150013002c>; Telford, A. B., Case of rhinoplasty, *Lancet* 9, 1870(i) 607, [https://doi.org/10.1016/s0140-6736\(02\)51122-3](https://doi.org/10.1016/s0140-6736(02)51122-3); Torek, F., Rhinoplasty for carcinoma of the nose, *Ann. Surg.* 1919(lxix) 667, <https://doi.org/10.1001/archsurg.1926.01130010236012>; Wood, J., Total loss of nose through disease; rhinoplasty by a new method; successful result, *Lancet* 9, 1870(i) 301 [https://doi.org/10.1016/s0140-6736\(02\)31107-3](https://doi.org/10.1016/s0140-6736(02)31107-3); Wood, T. B., Spontaneous amputation of the nose due to diabetic gangrene with case report, *Ann. Otol. Rhinol.* 1937(46) 1112-7.

⁶⁸published in: V.P. Filatov, Plastic procedure using a round pedicle (in Russian). *Vestnik oftalmologii*, 1917(34) 149 and 159.

⁶⁹J. Joseph, Zur Gesichtsplastik mit besonderer Berücksichtigung der Nasenplastik (mit einer Kunstbeilage). *Deutsche Med. Wochenschr.* 1919(45), 959-964. further details about his work: <http://www.jacques-joseph.de/>

⁷⁰Paolo Santoni-Rugiu, Philip J. Sykes, *A History of Plastic surgery*, Springer Verlag 2007, 96.

⁷¹Maliniak, J. W., Reconstruction of deformed chin in its relationship to rhinoplasty; dermal graft; procedure of choice, *Am. J. Surg.* 1938(40) 583-7. [https://doi.org/10.1016/s0002-9610\(38\)90634-8](https://doi.org/10.1016/s0002-9610(38)90634-8)

5000 patients with 15000 operations, and published his experiments and the well established documentation in 1920.⁷²

Today's reconstructive surgery of the nose is very complex.⁷³ Its objective is the restoration of the nose to normal or as near to it as possible both in function and morphology which means microsurgical works. It is a demanding area of plastic surgery due to the complexity of nose anatomy. Thus an epithelial lining must be provided in all cases of full thickness loss of the nasal wall and in some cases where the loss involves lining only. The surface loss must be replaced by skin matching to the nasal skin as closely as possible. Losses of supporting structures (bone or cartilage) must be replaced primarily by these tissues or with a soft tissue implant (dermal graft) or with alloplastic materials.

In the plastic surgery the Latin wisdom: „*si duo faciunt idem, non est idem*” is widely accepted, as outcome of the same case managed by two equally skilled and learned plastic surgeons will never be exactly the same – slight differences are inevitably present.

IV. Replacement of the nose

The cut nose can be replaced only directly after the event, if the blood circulation of the replanted organ is secured and the microvascular anastomosis is developed. The first reported attempt, in 1570, is the following: A Spanish soldier cut off the nose of a man and doctor Fioraventi cleansed it and bound it in place for 10 days with the result that the replant

⁷²Henry Frowde, Plastic Surgery of the Face, based on Selected Cases of War Injuries of the Face, including Burns. With original Illustrations by Gillies H. D., C.B.E., F.R.C.S., Major R.A.M.C.; with chapter on the “Prosthetic Problems of Plastic Surgery, by Capt. Kelsey Fry W., and “Remarks on Anaesthesia,” by Capt. Wade R. London: Oxford University Press, and Hodder & Stoughton, Warwick Square, E.C. 1920.

⁷³Chevalier Jackson, Chevalier L. Jackson (eds.), Diseases of the Nose, Throat and Ear Including Bronchoscopy and Esophagoscopy, Philadelphia/London – W.B. Saunders Company 1947, 91-93.

<https://doi.org/10.1001/jama.1946.02870230073027>, Érczy Miklós, Zoltán János, Plasztikai sebészet és műtétan [Plastic Surgery and Operation]. Budapest: Egészségügyi Kiadó 1954, 90-138. W. Schwab, Die Operationen an Nase, Mund und Hals; Beyer-Seyffert, Der Operationskurs des Hals-, Nasen, Ohrenarztes, II. Bd. 5. Auflage, Leipzig 1964, Johann Ambrosius Barth, 56-65. Ph. Bockenheimer, Handbuch der speziellen Chirurgie des Ohres etc. Bd. I.2, Leipzig 1922, 3. Auflage, 462-471; Akyurek, Mustafa; Safak, Tunc; Kecik, Abdullah, Microsurgical Revascularization of Almost Totally Amputated Alar Wing of the Nose. Case Report. Ann. Plast. Surg. 2004 Aug 53. (2.): 181-184. <https://doi.org/10.1097/01.sap.0000099703.22167.73>; David J Brain: The Indian contribution to rhinoplasty, J. Laryngol. Otol. 1988(102) 689-693, <https://doi.org/10.1017/s0022215100106164>; Carpue J. C., An account of two successful operations for restoring a lost nose. Plast. Reconstr. Surg. 1969. Aug. 44. (2.):175-182. <https://doi.org/10.1097/00006534-196908000-00015>; Gonzalez Martinez R, Marin Bertolin S, Marquina Vila P, Neira Gimenez C, Amorrortu Velayos J. [Reconstruction of the nose using expanded forehead flap], Acta Otorrinolaringol Española. 1994. Mar-Apr. 45. (2.): 121-123.; van der Lei B, Marck K. W., [Plastic surgery treatment of a nose tip amputation in an Eleven-Cities marathon skater]; Ned Menick F. J. Aesthetic refinements in use of forehead for nasal reconstruction: the paramedian forehead flap. Clin. Plast. Surg. 1990 Oct. 17. (4.): 607-622.; Okazaki M, Sarukawa S, Fukuda N. A patient with congenital defect of nasal cartilaginous septal and vomeral bone reconstructed with costal cartilaginous graft. J. Craniofac. Surg. 2005 Sep. 16. (5.): 819-822. <https://doi.org/10.1097/01.scs.0000179743.53047.1a>; Romo T. 3rd, Swartout B. G.. Reduction structured rhinoplasty. Dermatol Clin. 2005 Jul. 23. (3.): 529-540., vii; Tanaka Y, Tajima S, Tsujiguchi K, et al: Microvascular reconstruction of nose and ear defects using composite auricular free flaps. Ann. Plast. Surg. 1993 Oct. 31 (4): 298-302. <https://doi.org/10.1097/00000637-199310000-00002>

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survived.⁷⁴ Next in 1731, Rene-Jacques Croissant de Garengot (1688-1759) was ridiculed when he reported his experience of warming in wine and then reattaching a soldier's partially amputated nose.⁷⁵

In cases when a surgical reconstruction is impossible to be performed, the use of epithesis with artificial material can be benefit for the patient. Essentially, a well shaped warm and firm plastic material is fixed to the spectacle frame.

Replacement was rarely managed in early medicine. The most famous replacement-case is that of the Danish astronomer Tycho Brahe (1546–1601), represented even on his tomb stone in front of the altar of the Church of Our Lady before Týn, Prague. According to the legend, he had the bridge of his nose sliced off in a duel when he was 20, but he crafted himself a replacement made of a silver and gold alloy and wore this prothese until his death, carrying around putty, oil or glue (according various traditions) to keep it attached. He was living in Prague from 1588, where he was also burried. Looking for the verification of the legend, his corps was disinterred in 1901 by Heinrich Matiegka, who, among other things, investigated his nose, identifying a narrow curved mark at the upper end of the nasal opening, rimmed by a bright green stain of copper, except for its lowest third with the place of the cutting and of the prosthesis respectively.⁷⁶ A new research in November 2012 reported to have had reexamined his corps and reported, that the prosthetic was made of brass because of traces of copper and zinc.⁷⁷

The usual material for the artificial nose was in the later Middle Age Europe, however, the ivory, made generally for patients having lues / syphilis.⁷⁸ They aimed to imitate the shape and colour of the natural nose as much as possible.

The modern method of the rehabilitation of the loss of nose⁷⁹ is different, as similar large scale and complex tissue transfers are usually applied by micovascular methods. The prosthetic nose restores not only the normal appearance to the face, but also the function of the natural nose. It duplicates namely the function of the nose by directing air flow to the nasopharynx, and also helps to maintain proper humidity for the sinuses and respiratory

⁷⁴ T. Gibson, Early free grafting: the retitution of parts completely separated from the body, Br. J. Plast. Surg. 18, 1965, 1-11. [https://doi.org/10.1016/s0007-1226\(65\)80002-9](https://doi.org/10.1016/s0007-1226(65)80002-9) Later cases: 16 in a serie following dueling matches at Heidelberg University by Hotacker, in 1828 – with 10 succesful replants (A. Niazi, T.C. Lee, P. Eadie, D. Lawlor, Succesful reimplantation of nose by microsurgical technique, and review of litterature, Br. J. Plast. Surg.43, 1990, 617-620), [https://doi.org/10.1016/0007-1226\(90\)90131-i](https://doi.org/10.1016/0007-1226(90)90131-i)

⁷⁵ Garengot, René-Jacques Croissant de, *Traité des Operations de Chirurgie...* Seconde edition, revûe, corrigée & augmentée par l'auteur. Paris: Huart 1740, 52 (<https://archive.org/details/traitedesopra01gare>), retold: *Journal of Drugs in Dermatology*, Dec, 2002 by Alysya R. Herman; Gibson T. Flagellation and free grafting. Br J Plast Surg 1960-1961; 13:195-203, [https://doi.org/10.1016/s0007-1226\(60\)80038-0](https://doi.org/10.1016/s0007-1226(60)80038-0); Gibson T. Early free grafting: The restitution of parts completely separated from the body. Br J Plast Surg 1965; 18:1-11. [https://doi.org/10.1016/s0007-1226\(65\)80002-9](https://doi.org/10.1016/s0007-1226(65)80002-9)

⁷⁶ Report on the Investigation of the skeleton of Tycho Brahe, lecture at the Royal Bohemian Academy of Sciences on October 11, 1901 – printed in the academy's publications. (Joseph Ashbrook, *Astronomical Scrapbook*, Sky and Telescope, June 1965, 353 and 358.)

⁷⁷ Magan Gannon, Tycho Brahe Died from Pee, Not Poison (Live Science, 16.11.2012), <http://www.livescience.com/24835-astronomer-tycho-brahe-death.html>

⁷⁸ Székely András, *A szerelem krónikája, avagy az erotika kultúrtörténete*, Budapest: Officina nova 1988, 103.

⁷⁹ W. Schwab, *Die Operationen an Nase, Mund und Hals*, Beyer-Seyffert, *Der Operationskurs des Hals-, Nasen, Ohrenarztes*, II. Bd. 5. Auflage, Leipzig: Johann Ambrosius Barth 1964, 66.

mucosa. Again normal speech resonance is restored – and of course it provides support for eyeglasses.

V. Nose-replacement post mortem

A last and final loss of nose can also happen *post mortem*. It regularly appears when the corps is for long time in water,⁸⁰ or its decomposition has started in other ways, which must happen fairly often in ancient Egypt before mummification started if the corps was delivered to further country (as is the famous case of Alexander the Great), or it belonged to a beautiful woman, who was kept for longer at home to avoid necrophilia (Hrd. II.89)⁸¹. There was also another common cause, namely negligence and lack of skill during mummification process, or later destruction of the body by intruders in the tombs.

Looking again at the skull in the ancient Egyptian material of the Hungarian Natural History Museum, intruders can be closed out, as no robbers are interested in taking a nose alone for selling, and additionally making an evidently artificial wooden supply for later tomb robbers for their selling the mummy (in the middle age it happened for medicinal use⁸²), neither robbers for seeking jewellery do similar thing.

The soft tissue and cartilages of the nose decayed completely, only the bony parts of the nose were preserved with sharp edges. Thus, based on the anthropological examinations the decomposition seems to have been in an advanced state of condition by the time of the mummification. (By now, the prosthesis became fragmented, the nasal tip is incomplete, and some parts of it disappeared due to taphonomic processes. The close examination of the material lying on the eye socket revealed two layers of mud like material, one with fine granules, and the other with rougher ones. They are only possible to be built on a decomposed skull, without soft tissues. Thus the deceased person should have lost the nose after death.

The fact, that a nose was given her, suggests that the embalmers made conscientious work. They wanted to remedy the defect by giving the natural shape of the head with the outline of the nose for the afterlife. It could of course support a funeral mask, but as there is no documentation of any wrapping of the mummified head, the existence or not existence of a mask is unknown. Anyway, if it had a mask, it could fit without any problem on a bandaged head without a protruding nose or the mask could have been supplied with a solid nose, which would be easier to prepare than to build up the prosthesis on the skull with the two layers of mud and the cords tied on the face. In spite of these possibilities, they did the prosthesis.

Thus the replacement was really important for the ancient Egyptians. Of course, they needed the nose for their eternal life – its functions were reestablished. During the New Kingdom, they even created a whole book for the functioning of the body, the „*Opening of*

⁸⁰ E.g. some Hungarian cases: Rendőri Közlöny 282, 1885. dec.11, p. 570: in Radna: case no. 3703/85, Rendőri Közlöny 51, 1897. márc. 4, p. 102, Szent-István: case 336/97, Rendőri Közlöny 154, 1898. júl.9., Tököl, case no. 1591/98, Rendőri Közlöny 1898. dec.3. p. 552, Magyaróvár: no. 4261/98.

⁸¹ "The wives of men of rank when they die are not given at once to be embalmed, nor such women as are very beautiful or of greater regard than others, but on the third or fourth day after their death (and not before) they are delivered to the embalmers. They do so about this matter in order that the embalmers may not abuse their women, for they say that one of them was taken once doing so to the corpse of a woman lately dead, and his fellow-craftsman gave information."

⁸² At the beginning of the 20th century a few places still used the „mummy powder” for healing activities.

the Mouth” ceremony. In the paragraph 59D it says: “*Open his ears! Open the mouth of N! Open the nose for him!*”⁸³ For assuring its functioning, several centuries later during the Roman period in Egypt, the deceased could choose from two different works to help him living in the afterlife, the so called „*Book of Breathing*” and „*Second Book of Breathing*”, as breath was the symbol for life.⁸⁴

All in one, this person had a prosthetic nose produced directly for the mummy to be able to breathe the „*breath of life*” forever.

Pictures:



fig. 1. nose prosthesis from the left side



fig. 2. nose prosthesis from right side

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⁸³ Eberhard Otto, *Das ägyptische Mundöffnungsritual* (= *Ägyptologische Abhandlungen*. Bd. 3, 1–2, (Bd. 1: Text. Bd. 2: Kommentar.). Harrassowitz, Wiesbaden 1960.

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