



The Magic Tumbler for the Plague: Alicorn and its Medical-Occult Uses in 16th-17th Century Jewish Literature

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Abstract: Several 16th-17th century Jewish medical and religious sources from Land of Israel mention a substance called “alicorno”. The current study discusses the identification of the substance, its origins and medical usages according to the Jewish literature. “Alicorno” which are the tusks of the narwhal were believed to be the horn of the unicorn. They were perceived as having magical properties and were believed to have the power to cure a wide variety of illnesses, particularly to neutralize poisons. Responsa and medical sources from Eretz Israel region mention the two main usages of the narwhal – as a goblet with supernatural qualities for drinking water or potions and as a medical powder originating from a shaved bone.

Keywords: Alicorn Cup. Unicorn. Plague.

Resumo: Várias fontes judaicas médicas e religiosas do século 16-17 da Terra de Israel mencionam uma substância chamada “alicorno”. Este estudo discute a identificação da substância, suas origens e usos médicos, de acordo com a literatura judaica. Acreditava-se que a alicorno, extraída da presa do narval, o unicórnio do mar, era retirada do chifre do unicórnio. Ela era vista como possuidora de propriedades mágicas e acreditava-se que tinha o poder de curar uma grande variedade de doenças, principalmente para neutralizar venenos. Fontes médicas da região de Israel mencionam os dois principais usos do narval: como um cálice com qualidades sobrenaturais para beber água ou poções e como um pó medicinal originário de um osso raspado.

Palavras-chave: Alicorno. Unicórnio. Praga.

Introduction

According to the medieval and early modern medical literature, the ancient medicine chest contained dozens of naturally-derived medicaments – produced from plants, animals, as well as organic and inorganic minerals.¹ Modern studies on medications from animal source show that medicinal properties were attributed to various animal products – body parts and tissue, bones, skin, horns, teeth, bodily fluids (blood,

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¹ LEV, 2000, p. 119-250; LEV, 2002; SHEMESH, 2013.



Breast milk), and even secretions (urine, excrement).² Indeed, until the emergence of modern chemical medicine, nature and the natural environment were the only resource for producing simple and composite medications.

1 Purpose of the article

Several 16th-17th century Jewish medical and religious sources from Eretz Israel and the vicinity mention a medical substance called “alicorno”. This article discusses the identification of the substance, its origins and medical usages. As I shall show below, the substance’s identification and familiarity with its usages are extremely important for understanding the sources that discuss it. The issues that will occupy us are:

1. What is the alicorn mentioned in Jewish sources and what were its medical usages in the Eretz Israel region?
2. To what degree was the use of alicorn common in this region versus European countries?
3. What do Jewish sources contribute to our knowledge of the culture of alicorn use?

2 Descriptions of alicorn in contemporary literature

There are very few mentions of alicorn in Eretz Israel Jewish literature during the period under discussion. Alicorn is described as a “bone” used to manufacture goblets with occult qualities. According to other sources, the “bone” was ground into a powder, and other components were added to produce a medical potion. The sources available to us note that the main use of the goblet or powder was to treat people who had fallen ill during an epidemic. Moreover, “original” goblets were offered for sale, but there were also less valuable goblets made of “fish”. In this study I shall try to analyze the origins of the “bone” that was used for preparing the medical cups, what sea creature was used to make the goblets, and what were the underlying circumstances – as forgeries, alternatives, or for other reasons.³

3 Identification of alicorn – the horn of a unicorn or the tooth of a narwhal?

Researchers who investigated the presence of alicorn in Eretz Israel in the early Ottoman period did not focus on its precise identification or were uncertain about its origins. Yitzhak Molcho argued that alicorn is “a bone [that was] favored by the Christian peoples until the late period, for instance in the royal court of France”.⁴ He did not, however, relate to its identification, origins, and virtues attributed to it in the ancient medicinal world. Yael Buchman, who studies the material culture of Eretz Israel in the Ottoman period, at first raised the possibility that this was the bone of a

² SHEMESH, 2013, p. 105-249.

³ On the Phenomenon of Forgeries of foodstuff and medicines in Ancient world see SHEMESH, 2008.

⁴ MOLCHO, 1946, p. 147-156.



rhinoceros,⁵ and she raised this option following Swedish naturalist Fredrik Hasselquist (1722 –1752) who mentions Rhinoceros' horn as antidot medicine.⁶ In a later study with Zohar Amar they argued that the term “alicorn” originates from Portuguese (corno), meaning the horns or other body parts of animals such as deer or gazelle.⁷

The term “alicorno” has connection to the mythological unicorn – an ass, a goat, or a horse that has a single horn on his forehead.⁸ During the history many different substances, real or imagined horns, were believed to be the horn of the unicorn, which is called “alicorn” – fossilized bones, mammoth ivory, walrus tusks, the horns of rare mountain goats and the horn of the one-horned Indian rhinoceros. However, the most important was and the tusk of the narwhal, a medium sized whale from the *Artiodactyla* order (Infraorder: *Cetacea*) whose habitat is in the Arctic region.⁹

The narwhal males are characterized by a spiral tusk that protrudes from the left side of the upper jaw and might reach a length of 3 meters and weigh up to 10 kilograms.¹⁰ The largest population of the narwhal, and the primary source for medieval western markets, was located in the waters around Greenland, most likely Baffin Bay and Kane Basin.¹¹

⁵ BUCHMAN, 2002, p. 270.

⁶ HASSELQUIST, 1776, p. 303.

⁷ BUCHMAN; AMAR, 2007, p. 297.

⁸ On the unicorn see NICHOLS, 2011, p. 45; JONES, 1989, XV, 1, 56; SCHOLFIELD, 1958-1959, III, 41; IV, 52; XVI, 20; MILLER, 2014, p. 114-109; JOHNSGARD; JOHNSGARD, 1982, p. 121-131.

⁹ SCHOENBERGER, 1951, p. 284. On the debate which was the 'true unicorn (*Unicornum Verum*) – the mammoth tusk (*Unicornu Fossile*) or narwhal tusk see DUFFIN, 2017, p. 211.

¹⁰ MACDONALD, 2009, p. 836-839; MEAD; BROWNELL, 2005, v. I, p. 735; HAY; MANSFIELD, 1989, v. IV, p. 145–176.

¹¹ PLUSKOWSKI, 2004, p. 297.

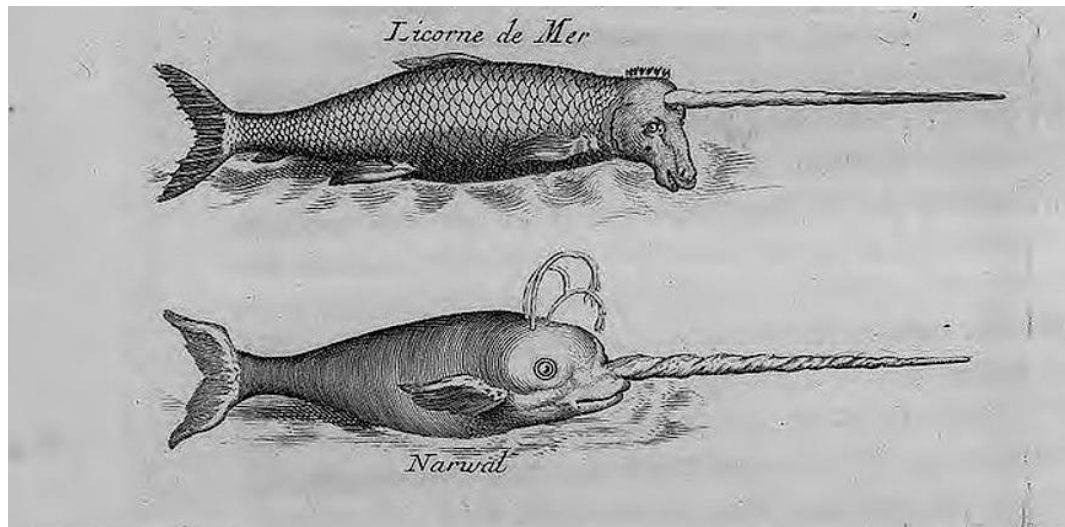


Figure 1: Up – Licorne de Mer (Unicorn of the Sea); Down – “narwhal”. From: Poncelin de La Roche-Tilhac et al (Ed.). *Superstitions orientales, Tableau des erreurs et des superstitions des principaux peuples de l'orient: de leurs moeurs, de leurs usages et de leur législation: ouvrage orné de plusieurs gravures en taille-douce*. Paris: Chez Royez; A Gand: Chez de Goessin; A Leipsick: Chez les héritiers J.-God. Muller; A Manheim: Chez Fontain: Et chez les principaux libraires de l'Europe, 1785, II: Sad-Der Des Parses, p. 2-3.

The belief that the narwhal's long spiral tusks are the “horn” of a unicorn was prevalent in various parts of Asia and Europe in the middle ages (figure 1). In those countries where narwhal tusks were marketed their origins were not disclosed, and this uncertainty helped establish that they originated from the legendary unicorn. Similar beliefs developed in the ancient world with regard to other substances brought from distant lands, for instance the that cinnamon comes from the Garden of Eden and is gathered from the nest of the phoenix.¹² It is not impossible that these beliefs were circulated by the merchants themselves in order to increase their profits.

Narwhal tusks brought from the Arctic region to Central or Western European countries were sold at particularly high prices.¹³ These tusks were used as raw material for producing extravagant objects and luxuries in the possession of European kings and lords. An example for this phenomenon is the tusks that are combined in the Throne Chair of Denmark in the Castle of Rosenborg in Copenhagen which was inspired by the biblical Throne of Solomon.¹⁴

The tusks were perceived as having magical properties and were believed to have the power to cure a wide variety of illnesses (types of fever, epilepsy, worms, gonorrhea, bleeding, wounds, diarrhea, leucorrhea, hemorrhoids), particularly to neutralize poisons.¹⁵ One of the conspicuous products made of the tusks were goblets

¹² DENIS, 1926: III, 11; HORT, 1916: IX, 5.

¹³ ZIMMER, 2014.

¹⁴ SHEPARD, 2003, p. 262; KEMP, 1959, p. 219.

¹⁵ JACKSON, 2004, p. 925-927; FOTHERINGHAM, 2000; DUFFIN, 2017, p. 211-260.



perceived as having magical curative power (figure 2). People who contracted illnesses that involved infections, contact with animal venom, or poisons, would use this goblet for drinking water or various potions and believed that it had healing power.¹⁶



Figure 2: Goblet made from a narwhal tusk – The goblet was designed by Jan Vermeyen, done in Miseroni workshop in Prague ca 1600. Narval tusk, gold, enamel, diamonds, rubies, agate, ivory, cameos. Now in the Kunsthistorisches Museum in Vienna.

The horn's curative virtues were mentioned in ancient sources. On the medicinal characters of the horn writes Ctesias (5th century BC), the Greek physician and historian at the Achaemenid court: "They say that the one who drinks from this horn will never experience terminal illnesses. No longer would he suffer seizures or the so-called holy sickness nor could he be killed with poison. If he drank the poison first, he would vomit it up and return to health".¹⁷

¹⁶ SCHOENBERGER, 1951.

¹⁷ NICHOLS, 2011, p. 74.



The real origins of alicorn as narwhal tusks was first revealed in the Age of Discovery (or the Age of Exploration) from the 15th to 17th centuries. In this period, explorers and discoverers such as Christopher Columbus, Vasco da Gama, and Ferdinand Magellan, began to search for new trade routes and discovered previously unknown regions and cultures throughout the world. As early as the mid-16th century, descriptions and drawings of the narwhal, featured as a fish with a long horn protruding from its nose, appeared in European literature, proving that “horns” originating from a sea creature were already known at the time (figure 3). Moreover, in 1556 Andrea Marini claimed that most “horns” in Europe originated from the sea and said that he fears that all horns in Italy came from the sea.¹⁸

Gradually, the knowledge that this is not truly the horn of the legendary unicorn began to spread, and consequently the value of the teeth dropped. Use of horns for medical purposes began to decline mainly from the mid-18th century, with the development of the empirical medical industry. Sources in which they continued to be mentioned indicate the belief in the power of the occult goblets allegedly produced from the unicorn, although knowledge of goblets originating from fish was also prevalent.



Figure 3: hunting the “Licorne de Mer”, 1575.

4 Alicorn in the responsa literature of Safed-based sages

The Eretz Israel responsa literature from the 16th century includes two responses that speak of using a goblet made of alicorn. One appears in the “Mabit Responsa”

¹⁸ SHEPARD, 2003, p. 258.



composed by R. Moses ben Yosef Trani (Salonica and Land of Israel 1500-1580),¹⁹ and the other in the “Avkat Rochel” Responsa composed by R. Joseph Karo (Spain and Land of Israel 1488-1575, called also “Maran” as a sign of respect), the celebrated author of the “Shulhan Arukh” halakhic tome.²⁰

We shall focus on several technical details related to the question, its formulation, time, and origins. The wording of the question in the two sources is identical and it was most probably addressed by the same person. The question is not worded in the first person, rather it is presented as a summary of the event described. Clearly, the names Reuven and Shimon in the question are not the actual names of the people involved, rather generic names customary in Jewish sources. Moreover, the identical question contains no information as to its date and place of origin.

R. Moses Trani, who was younger than R. Joseph Karo, was one of the religious judges in the Safed court headed by Karo, and we know of various disagreements between them on different halakhic issues.²¹ The question, which concerns an inquiry held by the court, reports that the question was addressed to the court and was formulated or written down by someone on its behalf. Although the two rabbinical authorities reached a similar conclusion, the wording and length of their answers differs (the answer of R. Ternai is shorter), namely each of the responders wrote his opinion separately and attached it to his compilation. Indeed, at the end of Karo’s response he notes that his words are based on his own personal opinion and he even ends his ruling as follows: “My opinion in this case I have written and signed as the young Joseph son of our esteemed teacher and rabbi the late R. Ephraim Karo”.

The question addressed to R. Terani and to R. Karo deals with a legal suit involving a goblet made of alicorn. The question as it is worded contains several details regarding the goblet and its medical-supernatural usages:

Query: May our Rabbi teach us: Reuven sued Shimon, that he had lent his wife one tumbler of alicorn bone to water his daughter, who was stricken with the plague, for they say that tumbler had the ability to cure disease, via the drinking of water from it. [the tumbler was lost] [...] [Reuven] claims that this tumbler was worth a great sum, due to its magical property, and Shimon claims that it was only worth a little, for many men had drunk from it and died. The court inquired the tumbler’s value, and a man who was reputed to be knowledgeable and doctor, testified that the aforementioned tumbler was not alicorn bone, but rather the bone of a fish of the sea, and that he had seen many tumblers like this. It was also known to the court that once, he lent Reuven [should be: “Reuven lent”. Compare

¹⁹ TRANI, 1629, v. 1, p. 85a-b.

²⁰ KARO, 1791, p. 98b-99a.

²¹ DIMITROVSKY, 1962, p. 71-123; BENAYAHU, 1991, p. 9-98.



to the version in “Avkat Rochel” Responsa 99a] the tumbler in return of pledge of perfumes.²²

Reuven, the owner of the goblet, related that it was borrowed by Shimon’s wife to treat their daughter who had become ill during an epidemic and died three months later. The goblet was then not returned to its owners. Shimon’s wife confessed to making medical use of the goblet, but then it was passed on to her neighbor who contracted the illness as well, and subsequently disappeared. The question was whether Shimon could be held liable for the value of the goblet or could only his wife be held liable, as in practice she was the one who borrowed it. The litigants presented various versions regarding the value of the goblet. According to the lender it was an original and valuable goblet that had proven its power, while the borrower claimed that the goblet borrowed had no value as several people who had contracted the illness had drunk from it but were not saved, i.e., it had not proven its magical capacity.

The court sent to inquire about proof that Reuven, the complainant, had indeed had in his possession a valuable goblet. A testimony received from a specialist physician who had been familiar with the goblet owned by Reuven showed that this was not an original alicorn goblet rather one made of the “bone of a fish from the sea”, and that such fake goblets were common in the market. As we know, fake goblets were a prevalent phenomenon in the middle ages and historical testimonies indicate that this generated various methods for examining the nature and originality of the goblets. The most common method was to place the tusk of a narwhal in water and see whether it emitted bubbles – if not then it was a fake.²³

The physician cited by the court did not declare that the goblet had been validated using one of the customary methods rather presented the judges with circumstantial proof that it was a fake goblet. He reported that Reuven had lent this goblet in return for a pledge of fragrant plants rather than for an object of greater value, indicating that the goblet was not made of alicorn whose worth requires a much more valuable pledge. The story shows that goblets of this type passed from hand to hand, resulting in the loss of the goblet in the current suit. It is not clear, however, whether it was lent for a fee.

The “fish bone” from which fake goblets were manufactured probably originated from the narwhal. Jewish literature mentions the term “bone” as a synonym for “horn” since the hollow horn of the *Bovidae* family sits on a protrusion of the skull and is removed from the animal’s head together with the skull.²⁴ As stated, the narwhal was considered a “fish” and was even drawn as such in contemporary literature, despite being a marine mammal. According to the testimony of the

²² TERANI, 1629, v. 1, p. 85a-b.

²³ SHEPARD, 2003, p. 116-118.

²⁴ BEN NACHAMAN, 1928, p. 12b.



physician, goblets made of narwhal tusks were commonly sold, although the belief in original unicorn goblets capable of curing illnesses still existed.

The goblet mentioned in the question addressed to the Safed court was borrowed, as stated, for use in Shimon's home during an epidemic in his city. The term "epidemic" (in Hebrew: *magefa*) might refer to various illnesses that spread through the population and left many dead. During the Ottoman period (1516-1917), there were local and country-wide epidemics. The written sources use the general term *magefa* and it is unclear whether this refers to the plague or to other disease outbreaks such as smallpox, typhus, or diphtheria.

During 1537-1575 both R. Karo and R. Terani were members of the Safed court. Assuming that the question was addressed during this period by residents of Eretz Israel, the epidemic described in the question might refer to one of the following: 1533 (an epidemic that occurred several years earlier and the suit was filed subsequently), 1540-1543, 1550, 1563, or 1572 - an epidemic that took the life of the famous kabbalist R. Yitzhak Luria Ashkenazi ("ha-Ari" ["The Lion"], 1534-1572).²⁵

Judging by the wording of the question, the goblet was intended for drinking water as part of a medical-occult treatment. In medieval culture and in the early modern period, the custom was to drink liquids for medical purposes using occult vessels such as bowls, goblets, and plates, in order to protect one from demons, bad fate, and misfortune. These implements derived their power mainly from the magical formulas and incantations inscribed on them.²⁶ In the current case, the goblet's essence derived from the miraculous qualities of the animal or substance from which it was manufactured and it indeed was not used to hold any medicaments rather only water.

This practice appears to have been based on the sympathetic law formulated by the Scottish anthropologist James Frazer (1854-1941), i.e., the Law of Contagion, whereby things that have come into contact with each other continue to affect each other when no longer in contact as well.²⁷ Hence, qualities or forces with which objects or people are imbued can be transferred to unrelated elements that come into contact with them. In the current case, water that comes into contact with the goblet absorbs the curative qualities of alicorn and when it enters a human body it may transfer the medical essence to the body of the sick person and treat the illness.

As stated above, miraculous curative qualities were attributed to alicorn, particularly with regard to neutralizing poisons. The ancients believed that during an epidemic there is "bad air", i.e., a stench and infection, and among other things suggested

²⁵ On the Plagues in Land of Israel in the Ottoman Period see BUCHMAN, 2004, p. 52; SHEFER-MOSSENSOHN, 2017, p. 3-26.

²⁶ HARARI, 2007, p. 55-84.

²⁷ FRAZER, 1905, p. 37-40; FRAZER, 1943: V, p. 52-214; HARARI, 2010, p. 22-23.



purifying the air using various means such as maintaining a large burning tar candle or placing a bird head shaped mask containing fragrances (particularly physicians who cared for patients).²⁸ According to the current response, Shimon's sick daughter had been stricken by bad air and the goblet was intended to neutralize the infection that had entered her body.

5 Alicorn in Jewish medical literature

Alicorn is mentioned in two medical prescriptions suggested by R. Chaim Vital, a kabbalist and popular healer from among the Ari's disciples, who lived and operated in the late 16th and early 17th centuries. According to R. Vital's prescriptions alicorn was used as an antidote for neutralizing poisons that accumulate in the body as a result of the plague. In his medical prescriptions, R. Vital devoted considerable attention to treating poisons and infections. He lists a large number of medicines with alexopharmic powers, of which one of the most well-known is the bezoar stone which is found trapped in the gastrointestinal system of the bezoar ibex (*Capra aegagrus aegagrus*).²⁹

The antidotes he mentions include, for example, theriac, one's own urine, various plants (onion, wormwood and laurel), as well as organic and inorganic minerals, such as several kinds of earth, antimony and emerald.³⁰ It may be assumed that Vital had many opportunities to deal with matters involving treatment of the plague as a result of plague epidemics that affected Eretz Israel in his time.

The first prescription given by Vital for treating the epidemic includes drinking several medicaments in water, for instance common rue juice (*Ruta* sp.), juice of a white onion, white feces of a dog immersed in liquid, or tiny chips shaved from an alicorn "bone" and mixed with water. Vital recommends treating patients immediately after the disease has been identified and giving them the series of potions in the first 24 hours after identification, in the assumption that any delay in treatment will aggravate the illness.³¹

The second prescription includes drinking several potions, of which the ingredients include dry powdered human feces, one's own urine, and tiny chips of "a bone called alicorn", shaved with a jeweler's lathe or knife. Vital recommends taking a tiny amount of alicorn, the size of one grain of wheat, although he says that a larger quantity might be more beneficial. It is evident that Vital does not recommend drinking from a goblet made of alicorn, rather drinking the bone after it was shaved.

Vital claims that coconut meat has alexipharmic powers that are no less positive than those of alicorn. In order to examine its medical effect, he recommends feeding two

²⁸ BUCHMAN, 2004, p. 59.

²⁹ BARROSO DO SAMEIRO, 2013, p. 193-207.

³⁰ BUCHMAN; AMAR, 2007, p. 79.

³¹ MUSAYOF MANUSCRIPT, p. 53a; BUCHMAN AND AMAR, 2007, p. 80.



pigeons equal amounts of a “fatal drug” (some poison) and promptly giving one of them the potion made of coconut (*Cocos nucifera*). He says that the pigeon who drank the medicine should survive while the other should die.³² It may be assumed that he recommended coconut as an alternative to alicorn in the understanding that some people cannot afford to buy the expensive substance. His recommendation is based on the “theory of alternatives” customary in the middle ages and early modern era, whereby physicians must propose alternative medicines for the poor and those with limited financial means who cannot afford to buy expensive medicines, particularly those brought from afar.³³

Conclusions

While alicorn (narwhal tusks) was documented in European literature as a medical substance capable of treating a wide range of ailments, in Jewish sources from the Eretz Israel region it is only mentioned in the context of curing epidemics and neutralizing poisons. Then again, its two main usages – as a goblet with supernatural qualities for drinking water or potions and as a medical powder originating from a shaved bone – are mentioned in Jewish literature. R. Chaim Vital does not mention the use of the goblet for medical drinking. As one proficient in the world of medicine and of occult magic, it is hard to assume that he was not familiar with this practice, and perhaps in his opinion it was preferable to drink the shaved substance.

Similar to European sources that discussed the issue of fake alicorn, Jewish sources too document this concern. We found, however, no reference to ways of judging the originality of the substance. In Jewish halakhic literature, a goblet made of alicorn is mentioned in a tort suit. The question raised was whether it is possible to hold liable a person who lent such a goblet to a friend and it was subsequently lost, if the goblet cannot be determined as “original” with any certainty. According to one of the testimonies, fake goblets abounded. The 16th century responsa literature indicates that not only in Europe rather also in Eretz Israel it was already known that alicorn is the “bone of a fish from the sea”, i.e., manufactured from the narwhal, and that goblets made of its tusks are fake.

Alicorn has a fairly considerable presence in European culture. In contrast, it is hardly mentioned in Eretz Israel literature, although as stated one report says that many such goblets were observed, a fact that appears to indicate an active medical substance. Assuming that this is a “miraculous” substance that was probably in high demand, it is hard to explain the disparity between the limited presence of these goblets in local literature and the actual alleged circumstances. Several explanations may be proposed:

³² MUSAYOF MANUSCRIPT, p. 28a; Buchman & Amar, 2007, p. 80.

³³ HAMARNEH, 1970; LEVEY, 1971.



A. The information on the high prevalence of the goblets sounds reliable, but it comes from a single report. In order to receive a more well-established picture more evidence is necessary.

B. Due to the distance between Eretz Israel and the regions in which the narwhal was hunted (the Arctic region) and traded (Central and Western Europe), alicorn was an expensive medical good and therefore original goblets were few and far between. It is not impossible that the presence of many fake goblets in the Eretz Israel region had the effect of reducing the treatment technique that utilized “miraculous goblets” in favor of other medical practices. We have already stated that R. Chaim Vital recommended an alternative substance to alicorn, probably because the latter was expensive and unaffordable.

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