

# Ranula in the Arab Medical Heritage

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## Summary

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Human tongue is one of the important organs which contribute in food smashing, swallowing and speaking. It's the mirror of the entire body status. The tongue may be exposed to various diseases with varied symptoms and signs. Also many syndromes have some symptoms reflected on the tongue. Arab physicians talked a lot about this organ, where they indicated its benefits, anatomy and innervations. They devoted separate chapters of their authored scientific works to speak about the various tongue diseases. The frog sack "Ranula" is considered one of the most common and important diseases, so there is approximately no Arab work that didn't indicate this case. It's noted that Arab physicians have set a specific diagnosis for this sickness and they numbered its causes and set treatments that varied between conservative drug treatments and surgical therapies. It's absolutely clear that modern medicine is still using the same term created by the Arab physicians which is "Ranula" and the most utilized method today for treatment is the same used by the Arab physicians such as Ibn Sina and Al-Zahrawi.

**Keywords:** Tongue Diseases, Frog Sack, Ibn Sina, Al-Zahrawi, Medical History

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### Identification of Ranula

Thabet Ibn Korrah mentioned in his book *Al-zakhira* a brief description of the frog, he said: "sometimes a gland is created under the tongue which may hinder its movement" (1).

Al- Razi said in his book *Al-Hawi* in quotation from *Bolos* his definition of the frog: "the frog is a hot tumor under the tongue especially in boys (2).

Ali Ibn Abass Almagousy in his book: "the complete reference book or the Royal book" described the frog "it's a gland beneath the tongue caused by the dense collected humidity (3).

In his turn Al-Zahrawi talked in his encyclopedia "Al-Tasrif" about the frog and mentioned its causes and signs: "it is a tumor similar to a frog and it is generated by pure sputum or sputum mixed with black colored matter, and its sign is the white color and humidity of sputum and its mixed black color is featured being dark, rigid and lower humidity (4).

Ibn Sina said in his book *The Canunn* "the frog is like a semi solid gland beneath the tongue with a color similar to that formed by the tongue surface and the veins which is similar to frog shape and its cause is a dense viscose humidity (5).

### Ranula Treatment

The treatment for Thabet is by medicaments, which is to massage it with Banoshader (which is a kind of salt which gets out a solid metal) (6), and Gall oak (a tree similar to cypress from the *Coniferae*). If it is cooked with vinegar and drunk it will tighten the gingiva and prevent its wearing (7), If this was sufficient then it's ok otherwise the hot drug prescribed for bloody gingival should be taken as rinse with vinegar and salt (8).

Al-Razi added to the treatment, making bleeding under the tongue and treating it with vitriol which is mercury and silver. It will tighten movable teeth and treat the sub glossal Ranula and the Zengar which is the basic copper (brass) acetate with some brass carbonate (9).

He said "if it is possible to make bleeding then the vanes beneath should be bleed (phlebotomized), Zengar and Kolkstar (which is the Romanian yellow Vitriol) (10) and gall -oak which are placed on it and rinse with hot constrictive water which is added to the decomposition of olive leaves and Caper plant (roots)" (2).

Al-Razi mentioned in other place the therapy of Ranula by saying: "the Ranula beneath the tongue has

a burning vitriol Sorengan (a plant like white iris and its leaves dry old chancres) (9) and are combined with egg albumen and placed beneath the tongue" (2).

The treatment for Almagousi is by medicament and surgery: "by repeatedly massaging it with sal Amonica (ammonium salt) and gal oak which are finely smashed and that a part of the burning vitriol is taken with a part of Sorengan finely smashed and mixed with egg albumen and left under the tongue.

If a tongue of a boy is rubbed with Ranula under it with thymus and pomegranate blossom it will make him recover.

With the drug described in the section of bloody gengiva it will benefit for chronic cases otherwise the iron should be used by hanging it in a hook which is scraped and the patient should rinse with vinegar and rose oil and treated locally with chancre treatment (3).

The treatment by Al-Zahrawi "if it is small sized it should be treated with borax which is a salt generated from Salina stones and this name is given to all types, but the type known now is the fragile while one (7) or with salt better or pennyroyal (it's land wild basil, mountainous and river side. The wild is called thymus by the people of Syria which benefit the injuries of the mouth) (10) or with salt of ammonia.

If it is gone, then it's will be good, otherwise it should be treated with hot drug until it is darkened and opened then it is treated until it is completely disappear.

If it tends to be white with moisture, then drop the hook in it and incise it with kind scalpel and remove it from all sides.

If you have severe bleeding during your work place powder vitriol until bleeding stops and then return to work until you completely remove it, then it's rinsed with vinegar and salt and treat it will all relevant treatments until it's cured" (11).

In his turn Ibn Sina arranges treatment starting from mild constrictive drugs to hot hard drugs and finally to bleeding.

He says "the treatments should be tried starting from corrosive decomposing drugs such as ammoni-

um salt, vinegar and salt and vitriol. If these drugs were not effective, the hard hot drugs should be used such as Asfarion and wet egg drug and using bleeding under the tongue and strong anti ulcerative drugs. If all these were not effective, then hand work should be done" (5).

### *Discussion*

We still use the Ranula "the frog sack" to describe this case.

It is in fact not a tumor but a form of retention sacks and it is closely related with submandibular and sub glossal salivary glands and sputum gland in the bottom of the mouth.

These cysts are seen in the bottom of the tongue between tongue root and the mandible, at exactly in the middle distance, and these cysts may get a big size as indicated by Al-Zahrawi where they fill the whole mouth.

It is believed today that the main cause of these cysts is the blocking of salivary ducts. It's known that the cause of this blocking is sputum flow (this was described by Ibn Sina in saying that it is a severe or dense viscose humidity).

These cysts manifest as non painful swollen body which is gradually increasing in one side of mouth bottom under front part of the tongue and it may fill the other side of the mouth bottom and may take a shape of lobules.

For the treatment, some Arab physicians went, such as Thabet Ibn Korrah to that drug therapy is enough while most of them adopted complete surgical excision of the cyst which is a method still used until today to treat this disease in addition to oral rinses to avoid secondary infection.

There are other methods such as:

1. Some prefer excise part of the external wall of the cysts and then keeping its interior open with a proper cover which is placed for approximately 6 weeks.
2. A part of the external wall is removed surgically and the dermal oral layer is stitched to the cyst remains.

3. This kind of cysts tends to relapse and forming again, so it is usually made to excise the entire sub-glossal gland to avoid relapse and complete cure (12).

It is worth mentioning the advice mentioned by Al-Zahrawi for the necessity to distinguish Ranula from the cancer tumor which is solid and in this case the tumor should not be managed.

### **Conclusion**

As we saw by studying what is written by most famous Arab and Moslem physicians about Ranula.

They showed a great deal of prospective ness (objectivity) and accurate notice and also they had a high professional knowledge about tongue diseases and treatments.

The Arab physicians set various definitions of the Ranula cysts which are varied between considering it a tumor and a gland; however they all agreed that its cause is dense viscose moisture which is known today by sputum.

The Arab physicians used several methods to treat this disease with some of them are still used until today.

The methods indicated by Al-Zahrawi to open the cyst only without excising it is in conformity with the method no. 1 which we mentioned in the context of modern therapies.

It's important to remind that the main method of treating the Ranula cyst today is the same used by Arab physicians in the past which the complete excision of this cyst and this is a miracle done by our ancestors which needs all respect and admiration.

### **REFERENCES**

1. Ibn Korrah, Thabet, 1928, the Fortune (Arsenal) in medicine ,”Alzakhera” realized by George Soubhi, Emir print house, Cairo, P. 49.
2. Al Razi Abou Bakr Mohammad Ibn Zakarya, 1995, Al-hawi in medicine, 1<sup>st</sup> edition, print house of Ottoman encyclopedia, Hydar Abad, 3<sup>rd</sup> volume, pages 210-211, 214.
3. Almajousi Ali Bin Abass, 1996, The complete medical profession (Kamel Alsenaa Altoby), institute of Arabic Islamic sciences history, Frankfurt university, 2<sup>nd</sup> volume, page 301.
4. Alzahrawi, Abou Alkassam Khalaf Bin Abass 2004, Altasreef Leman Ageza An Altaeef, 1<sup>st</sup> edition, realized by: Soubhi Hammami, Kuwait organization for scientific development, page 478.
5. Ibn Sina, Abou Alhousain Bin Ali, The Law in Medicine “Alkanoun” 3 volumes, Almouhanna library, Baghdad from Bolak printing (edition) 2<sup>nd</sup> volume page 180.
6. Ibn Albytar, Dyaul Den Abdullah Ahmad Alandalusi Almal-ki, the collector of medicaments and food components, 4 volumes, Almouhanna library, Baghdad volume 4, page 185.
7. Antaki Daoud Bin Omar 2001, Tazkerat Alalbab and Algame Lylagab Alogab, 1<sup>st</sup> edition, Alfikr for publishing and printing, Beirut, 1<sup>st</sup> volume page 87, 238.
8. Ibn Hubal 1996, Almokhtarat Fe Alteb, institute of Arabic Islamic sciences history, Frankfurt university, 2<sup>nd</sup> volume, page 76-77.
9. A group of authors, 1996 the international Arabic encyclopedia (sciences at Arabs and Moslems ) 1<sup>st</sup> edition, encyclopedia works establishment for publishing and printing, KSA, volume 16, page 435.
10. Altourkomani, Almalek Almothafar Bin Omar Bin Ali Ras-soul Alghassani, 1951, Almotamad fe Aladwya, corrected and indexed by Mostafa Alsaka, 2<sup>nd</sup> edition, Almarifa house, page 192, 272-273.
11. SPINK S. & LEWIS G.L., 1973 Albucasis on Surgery and Instruments. The Welcome Institute of the History of Medicine, London, Oxford Pr. Page 299.
12. Anbari Nezar, 1997, mouth diseases, Damascus university publications, 2 volumes, page 34-37.