

# HISTOIRE DE LA MÉDECINE/HISTORY OF MEDICINE

## AHMAD IBN ABY AL'ASH'ATH (959 AD) STUDIED GASTRIC PHYSIOLOGY IN A LIVE LION

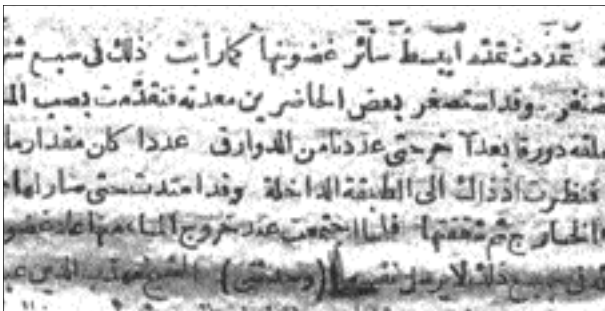
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Haddad FS. amhad ibn aby al'ash'ath (959 AD) studied gastric physiology in a live lion. J Med Liban 2006 ; 54 (4) : 235.

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The recent article of Amjad Hussain [1] reminded me of the famous old physician from Mosul, Iraq, aHmad ibn aby al'ash'ath (dec 975 AD) ['ash'ath means disheveled] who was also a great and wise teacher and the renowned author of several medical books. He described the physiology of the stomach in a live lion in his book "*algAḍy waalmugtaḍy*" which he finished writing in April 959 AD at the Castle of Barqa in Armenia [2]. A manuscript fragment of "*algAḍy waalmugtaḍy*" is preserved in the British Museum (Supplement 786) [2-3]. I have a photographic copy of this manuscript in my library [4].



*Stomach physiology in a live lion  
by aHmad ibn aby al'ash'ath (959 AD).*

The section on gastric physiology has been quoted by ibn aby uSaybi'a in 1270 AD [2] (Figure above). Here is an English rendition of this very interesting quote :

*"When food enters the stomach, especially when it is plentiful, the stomach dilates and its layers get stretched ; I observed this in a live lion which I dissected in the*

*presence of Prince Ghadanfar [5]. Some onlookers thought the stomach was rather small, so I proceeded to pour water in the lion's mouth and continued to pour jug after jug in its throat ; and we counted until the stomach filled up with about 40 ra'Tls [equivalent to 18 liters]. The inner layer of the distended stomach became as smooth as the external peritoneal layer. I then cut open the stomach and let the water out, the stomach shrank and I could see the pylorus. God is my witness."*

This sounds like a pretty heroic procedure that, to our knowledge, has no parallel in the annals of medical history. To borrow a term from röntgenology, one could say that this is real interventional anatomo-physiology at its best. By initiating one of the first experimental events in gastric physiology : the observation of the physiology of the stomach in a live lion in 959 AD, aHmad ibn aby al'ash'ath preceded William Beaumont († 1853) by almost 900 years. He should be given proper credit for his truly pioneering work.

### REFERENCES

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2. ibn aby uSaybi'a. `uywn al'anbA' fy TabaqAt al'aTibbA' [Sources of information about the categories of physicians]. Muller M, editor. Cairo : Wahbiyya Press, 1882, volume 1 : 245-7 ; and volume 2 : 143.
3. Brockelmann C. Geschichte der Arabischen Litteratur. Weimar 1898, Volume 1 : 237 ; Berlin 1902, Volume 2 : 524 ; Leiden 1937, Suppl I : 422.
4. Haddad FS. Catalogue of the Library of Dr Farid S. Haddad. Volume 1, History of Medicine : Item N° 48.
5. Ghadanfar alhamadAny (939-979AD) was the Governor of Mosul.

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