HADHMAD IBN A BY AL’ASH’ATH (959 AD) STUDIED GASTRIC PHYSIOLOGY IN A LIVE LION

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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 "al Aby waalmugtaby" which he finished writing in April 959 AD at the Castle of Barqa in Armenia [2]. A manuscript fragment of "al Aby waalmugtaby" is preserved in the British Museum (Supplement 786) [2-3]. I have a photographic copy of this manuscript in my library [4].

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 raTis [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 roentgenology, 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

5. Ghadanfar alhamadAny (939-979AD) was the Governor of Mosul.

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