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FIG. 1. From Rolando de' Capezzuti's *Cirurgia*, Rome, Casanatese Library, Ms. Nr. 1382 (A. II. 15). The picture shows a doctor performing a surgery in a human thyroid gland.

Historical Note

Thyroidology in the Medieval Medical School of Salerno

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THE *SCHOLA MEDICA Salernitana* was the worldwide known medieval Medical School of Salerno in the south of Italy; for this reason it was called *Hippocratica Civitas* (Town of Hippocrates). At that time it represented the most important native source of medical knowledge in Europe. Patients and students from all over the world flowed together into the "*Schola Salerni*" the former to recover and the latter to learn the art of medicine.

The school at the beginning kept the Greek-Latin cultural traditions, and then merged them harmoniously with Arab and Jewish ones. There are several findings that indicate a great interest for thyroid disorders in this school. Initially studies about anatomy represented the first step in the field of thyroid disorders; in particular, surgeons of Salerno utilized pigs, because at that time human autopsy was forbidden by edict of Frederick II (A.D. 1241) (1). So treatises such as *Anatomia porci* by Cofone (1085–1100) and *Demonstratio anatomica* by an anonymous writer, were produced. Roger Frugardi (before 1140 to ca. 1195), also called Rogerius Salernitanus, the Salernitan surgeon author of *Post mundi fabricam* (around 1180), which was considered at the time the surgical text par excellence all over Europe (2). In this work, he wrote in the chapter *De bocio*: "*Bocius fit, in gula et fit ad illud, tale experimentum: cantando pater noster, fodias nucem, quae nondum fecit fructum, et radicis eius cum tota substantia bene pistate, cum granis piperis bulliant in optimo vino*" (3); that is, "Goiter is treatable by saying the Lord's Prayer in the morning and drinking a tincture made with a barren walnut leaves and roots, boiled in good wine with a pinch of pepper added."

As an alternative, a typical pharmacological cure was a powder obtained from burnt and dried marine sponges (4) (phylum Porifera) having high levels of silica, calcium phosphate, sodium and sulphur chloride, iodine, bromine, and magnesium and calcium carbonate and useful to treat various kind of sickness. It had effects on respiratory mucosa, cardiovascular, lymphatic and endocrine systems, and above all on gonads and the thyroid gland. Since Rogerius

was a surgeon, if the previously mentioned pharmacological cures were ineffective, he prescribed the *seton* method, as quoted hereafter: "*Si vero talibus experimentis patients non liberabitur, ad chirurgiam est redendum*" (3); that is, "If these cures are not effective, it is necessary resort to surgery."

To do surgery, two hairs bound to red-hot iron wires were threaded at the bottom of the neck, and were replaced twice a day. If this surgery was ineffective the following step was to use a scalpel to dig out the calcified nodules by hand (4). Afterwards Rolando de' Capezzuti (before 1200 to 1250), also called Roland of Parma, a student of Rogerius living in Bologna, wrote the *Cirurgia* (1220), also called *Rolandina*, a commentary on the Salernitan surgeon text, that became the second of the eight great treatises that marked the rebirth of surgery into Europe after centuries of bleak nothingness. In this work Roland introduced one more treatment for goiter, which was based on cuttlefish bone and burnt (or dried) starfish.

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