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Medical auxiliaries from the physician's viewpoint in Ancient, Medieval and Renaissance medical texts: codifying professional skills or establishing a hierarchy?

Ancient, Medieval and Renaissance medical treatises written by physicians contain information pertaining to various categories of people involved in healthcare. In the case of specific patients, women and children, female assistance by midwives and nurses is indispensable; female auxiliaries often replace the physician in crucial moments such as birth or swaddling. When specific technical skills or professional activities regarding medicinal substances are concerned, druggists step on stage.

Female "paramedics" are not academics or learned persons like physicians. Physicians or surgeons (the latter in treatises which include references to specific obstetric experience) provide comprehensive descriptions of their assistants' mission and practice in their treatises.

The situation for druggists is more complex: they could be learned botanists or simple merchants; whatever their learning and training may be, their social position differs from the physician's.

Galen, Hippocrates and Soranos of Ephesus refer to female "paramedics". Razes, as well as Avicenna, two physicians, and Ibn al-Quff, a surgeon, underline the instrumental role of nurses in child nutrition and development and provide detailed descriptions of the ideal nurse. The Renaissance commentators of Galen (François Valleriole, Leonhart Fuchs) insist on the competence and morality of midwives and nurses. The French Renaissance physicians and surgeons Simon de Vallambert, Jacques and Charles Guillemeau refer to Galen (but not to Soranos) as well as to the Oriental Medieval physicians, Avicenna and Razes, in order to emphasize good practices and prevent errors of female "paramedics".

Our aim is to focus on midwives and nurses in order to examine a "gendered" medical practice by persons who did not study it in an academic context: how and by whom are they to be "educated"? How do physicians establish the hierarchical limits between them and their assistants? What is the status of "paramedical" knowledge: amateur or professional, although not officially included in the academic medical curricula?

Concerning the comparison between male and female paramedics, we will only open the debate here with a working hypothesis, as our study is still a work in progress.

The characters of the story and their context

We propose to classify the characters of our story in two categories, according to the target public (they are distinguished by different colors in the timeline): on the one hand, the Hippocratic and Galenic corpuses, and the Renaissance commentators of Galen, whose readers are not female, because their aim is to transmit a learned ancient Greek knowledge to physicians in an academic context; Valleriole was also a practicing physician in the city of Arles, but when he refers to midwives and nurses there is no reference to personal experiences.

On the other hand, Soranos of Ephesus, whose treatise *Gynaecia (On the diseases of women)*, an invaluable source of information about the imperial Roman "gynecology", written in Greek, includes a detailed section on midwives, explicitly addressing a female public (1, 3): "the excellent midwives" who will recognize themselves in Soranos' words, and the ἀρτιμαθεῖς, literally those who have just finished learning, the "beginners", the former being the models for the latter. The Renaissance physicians and surgeons Simon

de Vallambert, Jacques and Charles Guillemeau, expect to be read by a female public, in order to educate it. This is one of the main reasons of the use of French in Vallambert's *Five books about the way to feed and take care of the children* (Poitiers 1565): he explains that otherwise, he would use Latin. Charles Guillemeau, in the preface of the edition of his father's Jacques treatise *On the pregnancy and delivery...* (1609), specifies that it would be "a good occasion [for midwives] to acknowledge many failings concerning the dexterity during deliveries or the care provided to new mothers"; ladies can learn how to take care of themselves if they do not want to appeal to a (male) surgeon, "because of their sense of decency"; "young inexperienced surgeons or those who might work scattered here and there or away from towns" would "go through the labyrinth of instructions", preserve their "reputation" as well as the health of their women patients.

The Arabic Medieval treatises, although not explicitly intended for a female public, are closer to the second category, because of their educational purpose not being limited to an academic milieu, and of the importance given to practical knowledge concerning female paramedics and child care: Razes († 925) wrote a treatise on infant care (*De curis puerorum*) and was one of the earliest to put forward the specificities concerning children in the treatise *On smallpox and measles*. Avicenna, despite his reputation as a philosopher, is cited in Vallambert and Guillemeau as a provider of irrefutable practical knowledge on health care and remedies. We should remember that his *Canon of medicine* was a part of university medical curricula during centuries.

We will also refer to Ibn al-Quff (1233-1286), a famous surgeon and hygiene specialist, who devoted the first seven chapters of his sixty-chapter treatise *The complete book on how to preserve health and struggle against diseases* to the embryo, the pregnant woman, the new mother and the young child. Important though this treatise may be, it is not cited by the Renaissance physicians dealing with midwifery and infant care, as it was not translated into Latin.

Although their purpose is clearly to educate mainly through practical knowledge, Vallambert and Guillemeau abundantly refer to the ancient and medieval medical authorities, citing Hippocrates, Galen, Razes, Avicenna, and others, as if they wanted to prompt the female readership to read those treatises. While for Valleriole and Fuchs the authorities of the past were used as educational material intended for students and scholars who would actually have access to the texts and would be able to consult them, for Vallambert or Guillemeau the *medical* authorities legitimized *paramedical* knowledge, which thus acquires a higher status. Nevertheless, we think that it is important to note here that the authors of the treatises, ancient and modern, unlike the female readers, master both learned or theoretical, and practical or technical knowledge.

Midwives: high skill, but limited power

In the Hippocratic corpus, there are specific terms (ἀκεστρίς, ὄμφαλητόμος) for women who assist their cognates during delivery and can also perform some "medical acts" (ἰητρεύουσα). Although it is more likely that the majority of women gave birth without any assistance, women paramedics were regarded as able to diagnose some female diseases thanks to vaginal examination and a good knowledge of a body which is also their own. Technical skill is needed but there are no explicit references to a systematic apprenticeship.

Soranos provides a description of the ideal midwife: she must be literate, able to learn and memorize lessons; discreet, able to share family secrets; well trained; showing "a manly perseverance"; "having long and thin fingers". He thus suggests that her work

combines intellectual capacities and technical skill.

Galen's midwives proceed to delivery, receive the baby and model it in the very first moments of its life: they facilitate delivery "imitating the nature" (*De usu partium*, K. 4, 234-235); they know how to handle the woman in each step preceding delivery, and how to "encourage" her to push the baby out (*De naturalibus facult.*, K. 2, 151-152); they must prevent malformations of the baby by receiving it correctly (*De morborum causis* K. 7, 27). Their skill is recognized by the physician, who trusts their diagnosis even in cases such as the well known narrative about Boethus' wife, where they are unable to heal the patient despite their qualifications ("the best midwives in town").

We have neither significant elements about midwives' skill or competence in the Renaissance commentators of Galen, Valleriole and Fuchs, nor caveats or sharp criticism, even in Fuchs' highly polemic treatise *Paradoxa medicinae* (1535). This might be because midwives did not study at university, so they are not in contact with curricula full of "erroneous" Arabic medical learning or with physicians who favor such sources instead of the Greek ones.

In the specialized works of Vallambert and Guillemeau (father and son), particular attention is given to the midwife's education.

Vallambert is the personal physician of the Duchess of Savoie and Berry and, as specified in the title page of this treatise, "a short time since, of the duke of Orléans" (1558). He is a learned man who knows the Greek and Arabic medical texts, Galen, Avicenna, and Razes fairly well. The treatise is dedicated to Queen Catherine de Médicis. His intention is "to teach" and "make knowledge available in French". Although learned medicine ought to be written in Latin, Vallambert is "popularizing" it, adding some rare case studies from his personal experience, which is richer concerning nurses than midwives, because his main interest is infant care.

Jacques Guillemeau and his son Charles, as practicing surgeons, make some references to ancient sources (Hippocrates and in some cases Avicenna on the diseases of women, Galen on delivery etc.), and level many caveats or sharp criticism at midwives, illustrated by a lot of personal experience narratives which would serve as examples to "young surgeons" too. J. Guillemeau's description of the "good midwife" is based in Galen, and corresponds with the one of Soranos (who is never cited). J. Guillemeau refers to "sanctions" against bad midwives: this promotion of a professional and codified knowledge can be regarded as a serious attempt to put an end to various amateur practices, and to establish a [semi-] learned control upon women; Jacqueline Vons ("La parole d'une sage-femme: Louise Bourgeois 1563-1636") mentions a professional examination necessary for midwives or an apprenticeship since the second half of the 16th cent., and the existence of a guild, but professional obligations were actually established at the very end of the 16th century.

The topics concerning midwives:

- 1) Accurate diagnosis is the result of their capacity to decipher signs of pregnancy (for example by touching the vagina), as well as of female diseases. J. Guillemeau refers to Hippocrates' authority in the chapters about the diseases of pregnant woman midwives are supposed to diagnose. Yet in "sensitive cases" such as virginity or sterility, there is no place for a midwife's diagnosis: "some of them pretend to be able to say if a woman is a virgin or not, but all the famous universities of Italy rejected and condemned such an opinion, and, in France,

Cujas does the same: midwives have no legal power to make such a judgment » (J. Guillemeau). As sterility is a cause of divorce, impudent midwives “disorient” the judges who trust them as experts of male sterility, even though “the majority of them are illiterate and inexperienced in anatomy as they never practiced dissection”. Ch. Guillemeau explains in medical terms what “a potent man” means, accuses midwives of not knowing what male “seminal matter” is, and rejects midwives’ expertise even in female sterility.

- 2) Delivery: J. Guillemeau focuses on the *duties* of the midwife. As Galen recommends, the midwife “imitates nature”: according to J. Guillemeau, “nature” teaches “not to rush”, because ordinary delivery comes in time. Ignorant midwives or impatient to finish one delivery after another can put the woman and the baby in danger. The midwife and her assistants encourage the woman, but only the midwife uses ointments in order to facilitate birth, or receives the newborn child “gently”: gentleness is one of the most important skills of the good midwife. For Soranos in the Roman period, as well as for J. Guillemeau, difficult delivery is the surgeon’s task, because of the experience needed: “there are no experienced midwives nowadays”. But in the case studies narratives, he mentions a very experienced midwife (Mme [la] Charonne) who assisted him, and distinguishes such expert midwives from the others.
- 3) Technical procedures performed by hand immediately after delivery: to receive the newborn child; to tie and then to cut the umbilical cord; first care for the baby and the mother, including “modeling” of the malleable members of the baby. Ibn al-Quff describes meticulously the gestures of the midwife, without calling into question her skill. Despite his caveat against midwives acting “by oversight”, Vallambert appreciates their skillful intervention and approves of their “usual practice” (*communément*): this is one of the rare references to a practice not documented by the medical authorities. He then gives detailed instructions on the modeling of each member of the baby’s body, according to authorities including Avicenna, Razes, and Haly Abbas (= Ali Abbas al-Magusi), and an important *caveat* because of the risk to harm the child if midwives are not “learned” (*savantes*), a term that would apply to education and experience. Vallambert underlines the fragility of the baby’s members according to Galen (*De sanitate tuenda* Book 1, ch. 7 and *Ars med.* 27 Boudon 357 = K. 1, 377).
- 4) One of the usual tasks of the midwife (since Antiquity) is to prognosticate the viability of the newborn child. Vallambert uses the term “divination”, but actually she must *learn* how to decipher a series of signs, based on the medical authority of Avicenna. A midwife must be able to give resuscitation care to the baby if necessary. Emergency methods or remedies are listed here (unclear if they are current popular practices or not), but the best way is to breathe strongly to the child’s face.
- 5) There seem to be “authentic” midwives and “imitators”: J. Guillemeau mentions a young woman who died because she trusted “an assistant who imitated the midwife”. Those “assistants” of paramedics seem not to have any skill at all, and sometimes cause death or serious disabilities.

A particular case of rivalry: Charles Guillemeau against the “master midwife” Louise Bourgeois (1563-1636), midwife of the court of France.

This case has been studied by Jacqueline Vons from the midwife’s viewpoint. We will shift the viewpoint and refer to Charles’ *Remontrance à Madame Bourcier, touchant son*

Apologie, contre le Rapport que les Medecins ont fait, de ce qui a causé la mort deplorable de MADAME (1627), a response to Louise's *Apoogie* published the same year, where she rejects the responsibility of the death in childbirth of Marie de Bourbon de Montpensier. What Charles cannot stand, is arguably Louise's pretention to be a learned person, not just a technician, and to refer to ancient medical authorities such as Hippocrates, proud to present herself as the physicians' equal. Charles prefers Galen to Hippocrates. Yet this is a learned debate between equals!

Nurses: professionals or just substitutes of mothers?

Feeding the baby is of paramount importance in the ancient and medieval medical sources. Maternal breast-feeding is preferable, but not an absolute obligation. Galen and Soranos refer to the nurse's task to model the baby during bath or swaddling, hence the question of the different swaddling of girls and boys, and the nurse's responsibility to ensure the child's mental and physical well-being (Galen *De sanitate tuenda*). According to Ibn al-Quff, melodious songs calm down babies and young children. Those recommendations are the result of the physicians' experience (Ibn al-Quff), but, like the detailed instructions on the evaluation of the good quality of the nurse's milk or on the strict observance of some rules concerning her way of life during the breast-feeding period, they can be regarded as attempts to "professionalize" a "natural" female function.

The Renaissance commentators of Galen either oppose the biological mother to the nurse, or mix moral reproaches to nurses with criteria of their competence, citing indiscriminately medical and non-medical authorities. They also shift to some topics without a direct link to the nurses' technical skill or honesty, such as female beauty.

Valleriole is based on a medical idea, the continuum between intra- and extra-uterine life, but above all on the plea of the philosopher Phavorinus of Arles for maternal breast-feeding and on his own conviction that there is no better nurse than the mother. Despite his description of the good nurse's physical and moral qualities whose interdependence is supported by the authority of Galen (*Quod animi mores...*), the mother always wins in the competition with the nurse. When Valleriole comments on the Galenic caveat intended for nurses who should swaddle "in a balanced way" (ἰσορρόπως), he uses Christian authorities (Prudentius, Jerome, Augustine) and a poem of Propertius, all of them without any link with the nurse's task, to make a plea for natural beauty.

Fuchs' concern is esthetical: swaddling is supposed to make girls more attractive (*venustiores*,) while in Galen the term "balanced" is a part of the critique addressed to nurses who must not cause malformations to girls. According to Fuchs, the nurses' "imbalanced" way of swaddling, whose alleged objective is to make girls beautiful, turns into a ridicule form of their adult body, lacking any femininity. Is femininity a characteristic of good health? Galen makes no explicit reference to it, while Soranos refers to beauty as a concern of the midwives who model the girl's body (εὐπρεπέστερον σχῆμα): the different ways of handling girls and boys seems to be a part of professional skill in Soranos, while Fuchs is only based on literary references (Roman comedy, Terence) underlying ugliness.

Is the learned readership of Valleriole and Fuchs less concerned for detailed descriptions of the good nurse than for theoretical principles about female morality that guarantees the child's good health? Jacques Guillemeau, whose readership is mixed, repeats, without citing the treatise of Galen *Quod animi mores corporis temperamenta sequantur* (*That the faculties of the mind follow the temperament of the body*), that the

soul follows the body's temperaments, the humors resemble the morals, so there is "no comparison" between the mother and a nurse. Yet this is a mere preliminary statement in the dedicatory epistle of a long treatise *On how to feed and "govern" children since their birth...*, whose main character is the nurse.

Razes' criteria of the good nurse include physiognomy: external signs such as her appearance or the sex of her own child can determine her character and the quality of her milk. Her diet and way of life can of course have an influence on this quality. Yet, if physiognomy is important, is there room for the improvement of the nurse's professional level?

Vallambert wants to "teach infant care", to re-examine this sensitive topic, taking into account the ancient medical authorities, Greek and Arabic, without copying them, but on the contrary, by adding new experience which stems from his personal practice "and invention". He is proud to "make available" in French such knowledge. Without calling into question the nurses' experience or ability, he presents a "learning curriculum" and gives the physician the role of the teacher. Topics include physical conditions, as well as skill:

- 1) There are 7 conditions to fulfill for quality breast-feeding: Morality, age, sex of her last child, form of her breast (including nipples), quality of her milk, time since her last pregnancy, "disposition of her body". One must choose the best nurse, if the mother cannot breast-feed her child (Galen, Oribasius, Paulus of Aegina, Haly Abbas, Razes, and Avicenna). The detailed instructions on how to apply each criterion to the nurse to be hired could be interpreted as a set of steady rules to follow: we know that nurses were remunerated or received a stipend, so one must be cautious not to be cheated. J. Guillemeau thinks that nurses who cheat "must be whipped"! There are 5 criteria for the quality of the milk and some methods to test or improve it. Vallambert refers to a beverage increasing milk production recommended by Avicenna, a practice one can also find "in Flanders or Germany": "popular" or amateur practice thus coincides with medical advice, as in the Oriental sources, namely Razes, for whom regional medicinal substances and health care methods are to be taken into account for good health. Vallambert is confident that *the physicians* will provide the appropriate recipes and methods to correct the milk.
- 2) Rules of behavior and way of life: Avicenna and Bernard de Gordon, but also "the common opinion" (*le commun peuple*), determine how long after her own delivery the nurse can breast-feed the baby under her charge. Galen, Haly Abbas and Aristotle recommend sexual abstinence to the nurses: Vallambert and J. Guillemeau support this recommendation, insisting on the alteration to the nurse's milk caused by sex. The incompatibility is based on medical arguments concerning the child's health. For J. Guillemeau, as well as for Vallambert, the nurse's behavior is a part of her skill: she must be joyful and balanced; "her way of life must be the one required by the nature and habits of the child" (J. Guillemeau), or, to put it differently, by the child's "pleasure" (Vallambert): a long lasting pleasure presages intelligence and good disposition towards the "liberal arts and philosophy". The "wise nurse" provides different stimuli to the baby, in order to increase pleasure. Her own pleasure does not seem so important: is it regarded as a mere "professional obligation"?
- 3) The description of the nurse's expert gestures when she swaddles, bathes, cleans or puts the baby to sleep goes beyond the mere modeling of a "humid" body: she

must gently prevent *and* correct malformations (J. Guillemeau based on Galen; Vallambert based on Razes, Haly Abbas, Avicenna); methods of cleaning recommended by the most prominent Greek and Arabic medical authorities including Razes, Averroes, and Avenzoar are not so widespread "nowadays", Vallambert deplores; the baby needs healthy air; some scents are supposed to be more suitable to babies and facilitate sleeping; Avicenna and Razes discuss whether or not the baby must sleep immediately after eating. To put the baby to bed, one must "follow the nurses' *ordinary practice*" and the instructions of Galen (*De sanitate tuenda*).

- 4) Infantile diseases are not to be treated like adult ones, according to Vallambert. He cites Hippocrates (Aphorisms Book 3) and the Galenic commentary ad loc. to specify what diseases can occur in the newborn child and what others later on, when the baby has its first teeth. If "the bad milk of the nurse" can cause some of those diseases, Vallambert admits that there are also hereditary factors or other causes depending on particular circumstances. To answer the question of "who heals children", Vallambert and J. Guillemeau mostly refer to the nurse not as a healer, but as a "passive" medical agent vs. the physician, an "active" one. When the baby is still breast-fed, one must give remedies to the nurse, "as if she herself were ill". The nurse is regarded as a living "remedy", because of her direct connection to the sick baby. But those medications, based on the ancient Greek and Arabic medical authorities, are to be administered by physicians: the nurse does not seem to have her own medical knowledge, only practical "tips". Even in the case of grown up children who can tolerate mild medicines, it is the "learned physician" who prescribes and adapts them to each case, or the surgeon who corrects malformations or applies ointments whose recipes are given by J. Guillemeau. Vallambert refers to the recommendations of "the practitioners" to give mild medicines to children who have weaned. Who are those practitioners? Perhaps those who know well the medicinal substances (but no explicit reference is made to druggists, although there are many substances listed here). One of them is "Guillaume de Plaisance" (from Piacenza, Italy = Gulielmus of Saliceto ca. 1210-1280), surgeon and "master of medicine" in Bologna, a learned authority. The nurse can put some remedies in the baby's eyes or ears, or facilitate the baby teeth to come out and reduce pain (gently rub the baby's gum with her finger, and incline the baby's head downwards).

If the baby cannot urinate, "the women" (in French *bonnes femmes*, popular women), Razes and "some other people" have many recipes for efficient remedies. According to Vallambert, "all those remedies are good ones". To avoid chapped skin on the internal side of the child's thighs, "the women of our country" (French women or women living in the countryside?) "apply either ashes, or wood or other kinds of powder": this is evidence of the existence of amateur knowledge and practice of healing, but Vallambert does not specify how those women acquired this knowledge.

Female and male paramedics: what about druggists?

Druggists are mentioned in Fuchs' *Paradoxa medicinae*, where the Tübingen physician, botanist and professor of medicine examines the efficiency of medicinal substances, promoting Greek medical authorities such as Dioscorides or Galen over the unreliable Arabic ones, such as Avicenna or Razes. Sometimes praised for their skill and knowledge, like the Nuremberg druggist Georg Öellinger (Georgius Ellingerus 1487-

1557) but frequently criticized, their professionalism depends on the right *doctrine*, not on the strict observance of a detailed code. Fuchs urges them to *read* the right sources, undoubtedly the Greek ones.

Conclusion

Galen is not competing with female paramedics, whose contribution to female and infant care is to be improved but not called into question.

Soranos' midwife is literate, skilled, and painstaking "like a man".

In the Oriental medieval treatises dealing with "pediatrics", where learned medicine often goes side by side with regional therapeutic tradition, the female paramedics' body is a part of the continuum between the child and its milieu.

The Renaissance physicians and surgeons, through their more or less detailed advice and criticism, offer women "vocational" education, and, at the same time, access to the ancient learned medical authorities, which are popularized thanks to the use of vernacular language.

Codification of a "profession" goes hand in hand with the establishment of a hierarchy: paramedics have little room for manoeuvre and can hardly improvise; firm guidance is provided in books. Although hierarchy implies superiority of learned men over semi-learned or non-learned women, the status of knowledge available is implicitly changing: professional skill is not a mere technical ability, it is also the result of personal ethics and culture. Does it constitute a step towards bringing female *paramedical* agents closer to male *medical* ones? This debate still remains open nowadays.

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