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CLOSE ÞE LIPPIS OF ÞE WOUNDE, & SEWE HEM & ÞANNE CURE HEM. SURGICAL INSTRUCTIONS IN MIDDLE ENGLISH MEDICAL TEXTS

Abstract

The aim of the proposed paper is to describe the structural organization of surgical instructions found in Middle English surgical treatises, and to examine selected linguistic features. The data for the paper come from the *Middle English Medical Texts* (MEMT) and the full versions of two Middle English surgical treatises.
Keywords: surgical instruction, Middle English, medicine.

1. Introduction

Instructional writing and its development in early English medical context have been the subject of many scholarly studies. Most of them concentrated on the recipes (e.g., Hunt 1990, Jones 1998, Taavitsainen 2001a, b, 2012, Mäkinen 2004, 2006, Quintana-Toledo 2009, Sylwanowicz 2009, 2014, 2015, 2016, Marttila 2011, Alonso-Almeida 1998, 1999, 2013, Bator and Sylwanowicz 2016, 2017, 2018). There are also single publications on, for instance, medical dialogues (Taavitsainen 2009) or guides to a healthy life (Barrera 2009, Valle 2009). As regards surgical texts, there is a dearth of publications that would examine the structural organization of the passages concerned with "treating diseases or injuries by means of manual and operative procedures, especially by incision into the body.", i.e. with surgical instructions (Roberts 2014, after Banham and Voth 2015: 153–154). This lack of interest in these instructive texts may be partly explained by the fact that early English surgical treatises concentrate on the human anatomy, and

detailed descriptions of the human body dominate these writings. However, a thorough reading of the available editions of early English medical texts reveals that instructions on how to deal with injuries, are also well represented.

A preliminary examination of selected Middle English surgical writings has shown that the descriptions of operative procedures offer a step-by-step guidance. In addition, these procedures can be divided into some stages, e.g.: pre-operative, operative and post-operative, a division used in modern surgical manuals (cf. Khatri and Asensio 2003). This suggests that medieval surgical instructions were well organized texts that allowed the reader to follow along easily.

On account of the above, the aim of the proposed paper is to describe the structural organization of surgical instructions found in Middle English surgical treatises. The following questions will be dealt with: (i) what is the schematic structure of operative instructions? (ii) how are they inserted within the larger body text, (iii) are there any linguistic elements that enable the reader to identify surgical instructions? (iv) is the format of operative instructions recurring?

In order to answer the research questions, a representative group of texts that include surgical writings was selected (these texts are described in section 2 of this paper). The next step involved browsing the collected texts to find the instances of surgical instructions. A difficulty one encounters here is that the descriptions of operative procedures are usually included in longer treatises that begin with theoretical considerations of a medical problem, descriptions of human anatomy, and continue with diagnosis and treatment. Although surgical instructions are usually preceded by statements that mark the beginning of the operative procedures (e.g., *Of wound made in synewe and his cure*), these statements are often followed by more than one surgical treatment of a given injury. Therefore, it was necessary to read thoroughly the examined texts to identify all possible instances of surgical instructions. The last step was the examination of the structure and linguistic features of the collected instructive texts.

2. The corpus

The material examined for the present paper comes from the *Middle English Medical Texts* (MEMT) corpus, a computerised collection of medical treatises from c.1375 to c.1700 (Taavitsainen, Pahta and Mäkinen 2005). The texts included in MEMT are classified into three main categories: (i) surgical texts, (ii) specialised texts, and (iii) remedies and *materia medica.* Since the proposed study concentrates on surgical operative instructions, the material found in the first collection has been examined.

The MEMT corpus, with some exceptions, includes only fragments of texts, therefore the material was supplemented with the full versions of the following 15th century surgical treatises: (i) two Middle English translations of Guido Lanfranc's *Science of Cirurgie* (von Fleischhacker 1894), edited from MS Ashmole 1396 (Bodleian Library, Oxford) and MS Additional 12056 (British Library, London), and (ii) John Arderne's *Treatises of Fistula in Ano, Haemorrhoids, and Clysters* (Power 1910), edited from MS Sloane 6 (British Library, London). Guido Lanfranc was the leading medieval authority that laid foundations for the French Surgery, and his work had been translated into many European languages, including Middle English. As regards John Arderne, he is thought to be England's first notable surgeon. He is also remembered as the first surgeon to successfully treat *Fistula in Ano* 'a cyst that developed due to long hours spent on a horse' (Power 1910, Sylwanowicz 2018)[1].

3. The structure of surgical instructions

The examination of the selected Middle English surgical instructions has revealed that their structure is fairly regular. These instructions consist mainly of two stages: the heading and procedure. The heading is a term used by Bator and Sylwanowicz (2017, 2018) in their studies of the structure of early English recipes. According to the authors the heading "informs the reader about the content of the text to follow" (Bator and Sylwanowicz 2018: 31). In the recipes the headings usually consist of a title and/or a statement of purpose.[2] The surgical instructions also start with a statement that marks the beginning of the part of the treatise that tells the reader/surgeon how to deal with an injury or other medical problems. Hence, in the present paper the term proposed by Bator and Sylwanowicz (2017, 2018) will be used when referring to the initial stage of surgical instructions. The next stage, procedure, provides a step-by-step description of the operative stages and is an obligatory part of surgical instructions. A typical surgical instruction is illustrated in example (1) below. The part in bold marks the heading, whereas the remaining text is an example of the procedure part.

(1) **If a man be wounded in his stomak & þe wounde of þe wombe wiþoutforþ ne be not brood**, þanne kutte it more & þanne sewe the wounde of þe stomak wiþ a needle þat is iiij. squar & wiþ a sutil þreed, & þis þou schalt speciali, whanne þe wounde is in a fleischi place of þe stomak, for if þe wounde be aboue in a place of

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[1] For more on medieval surgeons and their practice see e.g., Bullough (1966), Beck (1974), Wangensteen and Wangensteen (1978), Pouchelle (1990), Siraisi (1990), Getz (1990).

[2] For more on the structure of recipes see also: Alonso-Almeida (1998, 1999, 2013), Carroll (1999, 2004), Cruz-Cabanillas (2017).

þe stomak þat is neruous, ne traueile þou not þere aboute þanne, for it is an idil / Whanne þou hast sewid þe wounde bineþe as it is aforseid, þanne springe þeron poudre consolidatif & soude þe wounde of þe stomak, & holde open þe wounde of þe skyn wiþoute, til þe wounde of þe stomak be hool// (Fleischhacker, *LSC*, 169/33–37 – 170/1–6)

The following sections will discuss in more detail the parts of the surgical instructions. Particular attention will be placed on the selected linguistic features.

3.1. The heading

As noted earlier, surgical instructions were inserted within longer treatises that were devoted to the particular part of the body, its anatomy and possible injuries. In order to find a treatment for a particular injury one had to either read the whole text or look for the statements – the headings – that marked the beginning of a curative procedure[3]. One of the strategic ways of inserting the surgical instructions was by means of conditional clauses, cf.:

(2)
(a) If a wound be made with a Swerde (MEMT, *LChP*, f. 21v)
(b) & if þat a wounde be maad in þe heed wiþ brusynge, as wiþ a mace, or wiþ a staf, or ony þing þat brusiþ (Fleischhacker, *LSC*, 122/3–4)
(c) If a wounde be made of a wode hownde and the cure ther of (MEMT, *LChP*, f. 25v)
(d) If a man be wounded in his stomak (Fleischhacker, *LSC*, 169/33–34)
(e) If a mannes ȝerde be swollen (Fleischhacker, *LSC*, 228/36)
(f) If þer come an enpostym or ony swellynge to a mannes tunge, & it come of hoot humours (Fleischhacker, *LSC*, 262/19–21)
(g) If it so þat a wounde be in a caua (Fleischhacker, *LSC*, 165/5)
(h) If it is so be þat þe wounde of his wombe wiþoutforþ be so brood þat þe guttis falle out (Fleischhacker, *LSC*, 170/9–11)

These headings, as seen in the examples above, varied in their length. Apart from the medical problem, e.g. wounds, swellings, abscesses, they often indicate the affected parts of the body, e.g. head (example (2b)), stomach (2d), penis (2e) or tongue (2f). In addition, we can learn about the causes of the injuries. For instance, the instructions for wounds may vary depending on whether they were given with swords (example 2a) or other instruments (example (2b)), or whether they were bite wounds caused by an animal, cf. *wode hownde* 'rabid dog' in (2c). Also, as exemplified by the

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[3]   In the manuscripts the headings are often marked with red ink. Sometimes, as in the works of Arderne, there are marginal illustrations that mark the beginning of a surgical operation (Jones 2002). Since the present study is based on text editions, the following discussion will focus only on linguistic, not visual, features of the examined instructions. For more on how visual elements supported the linguistic features in communicating the message in early English medical writings see, e.g.: Carroll (2005/2006), Jones (1984, 1987, 2002, 2006), Ratia and Suhr (2017), Tyrkkö (2017).

last two headings, some wounds may be so deep (example (2g)) that "they enter into the hollows of the chest" (Fleischhacker, *LSC*, 165) or so wide (example (2h)) that "the bowels fall out from the wound" (Fleischhacker, *LSC*, 170). As regards other medical problems, they might have been the result of an imbalance of some humours, e.g. in (2f) a hot humour is the cause of a swelling in the tongue.

Although conditional clauses prevail in the headings of surgical instructions, the following examples have been recorded in the examined material:

(3)
(a) Summen seien þat þe smale guttis moun be sowdid in þis maner: make a pipe (…) (Fleischhacker, *LSC*, 170/32–33)
(b) I wylle begynne at þe wounde at þe nese þat is y-kutte in lengthe, wose cure ys lyȝt to hele; brynge þe parties (…) (MEMT, *LSC*, f. 81a)
(c) Of wound made in synewe and his cure, wnderstond her that (…) (MEMT, *LChP*, f. 21r)
(d) In an hoot enpostym of þe ȝerde or of þe ballokis, þou schalt (…) (Fleischhacker, *LSC*, 228/10)
(e) Whanne þe apostym is broke, þan (…) (Fleischhacker, *LSC*, 220/10–11)
(f) Þe firste cure of þis enpostym is (…) (Fleischhacker, *LSC*, 223/31–32)
(g) In þis maner þou schalt helpe it / Take (…) (Fleischhacker, *LSC*, 267/34)
(h) Þis is þe cure of ficus þat comith of fleume, þou schalt (…) (Fleischhacker, *LSC*, 288/7)

As in the previous examples, these headings help to single out a particular surgical instruction. Some are in the form of prepositional phrases (examples (3c) and (3d)), time clauses (3e) or more straightforward statements (examples (3f)–(3h)), which directly introduce the reader to the part describing the treatment of the injury or other surgical problem. In addition to medical problems, some headings include personal references. For instance, example (3a) informs about an alternative treatment of a wounded intestine, as proposed by other practitioners. In (3b), on the other hand, there is a self-reference made by the author of the text: *I wylle begynne at þe wounde at þe nese* (…). Such examples, as many earlier studies confirm, give the text a more authoritative voice.[4]

The headings recorded in the examined material are not always very precise (cf. (2a) and (2c) and (3e) and (3f)) and do not indicate the injured part of the body. For instance, in the examined material, the heading: *In þis maner þou schalt helpe it* is not very informative. Only by back reference to the title of the chapter or by reading the lines preceding the heading, does one learn that that the treatment to follow concerns some breast ailment. Similarly, from *And ȝif it [wound] be with swerde* we also do not learn that

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[4] For more on interpersonal strategies and their role in early medical texts see, for instance, Marttila (2011), Mäkinen (2004), Sylwanowicz (2017).

the following treatment concerns the wound of the neck. This information is given in the title of the chapter: *Wonde of þe nekke* and the introductory remarks to the section, which inform that *Now we wyl tretyn of woundes þat beþ mad in þis place wiþ swerd oþere (…) wiþ an arwe, oþere with sum þinge semblable to hym.* (MEMT, *LSC*, f. 84b). In this chapter one can identify more than one treatment for the wounds of the neck, each marked by the headings which only mention a type of tool or weapon (sword, arrow, knife, spear) that caused the wound, e.g., *And if it be with a swerde…, And if þere be a synwe kutte…, And if þat þe wounde were y-mad (…) with an arwe oþere a knyff, oþere a spere, oþere sum þynge semblable to hem…* (MEMT; Fleischhacker, *LSC*).

3.2. Procedure

Procedure is an essential part of the surgical instruction as it explains how to deal with an injury or other surgical case. This part of the text can consist of three stages: pre-operative, operative and post-operative.

The pre-operative stage is not an obligatory part of the surgical instruction and in the examined material it occurs rarely. The aim of this part is to instruct how to deal with an injury or how to prepare the patient before the surgery. For instance, Benvenutus Grassus, a medieval expert on ophthalmology, advises to start the treatment of the cataract with purging the patient, see example (4). The next day, the patient and the surgeon should be seated on the bench, face to face. Then, the patient should keep one eye closed and stay still. Finally, the operation begins, cf. example (5).

> (4) Ffyrst he must porge his brayn with pelett callyd **pillule Iherosolimitane,** wherof thus is the makyng: Take turbite, aloes, (…). (MEMT, *BG*, f. 5)

> (5) And when he hath youen the pacyent purgacioun, on the day next foloyng abowt ix of the clok whyle he is fastyng do hym sitte ouerthwart [{a forme{], rydyng-wyse; and sytte you also on the stoke yn lyk wyse face to face. And do the pacyent to holde the hole eye cloos with hys oon hande, and charge hym that he syt stydfastly styl and styre not. And þen blysse the and begyn thy craft in the name of Ihesu Cryste. (MEMT, *BG*, f. 5)

In John Arderne's instructions on how to treat *fistula in ano* 'anal fistula, abscess', the pre-operative part is much longer and more detailed and includes both physical and psychological preparation. The first part is devoted to the selection of the patient who should be strong and "þe place of þe sekeneȝ wele colored and þat the pacient is godeherted and abydyng" (Power, *AFS*, 21/32–35). Next, the patient is taken to the room "Where þe lech schal do þe mynysteryng of cure" (Power, *AFS*, 22/2–3) and he is advised to be brave and obedient, cf.:

(6) þe gracious perfeccion of þis cure ow not only to be recced as now to þe possibilite of my gode bisynes, bot also to ȝour gode and abydyng pacience. (…) if ȝe be vnobedient and vnpacient to my commandyngs (…), ȝe may falle in-to a ful gret perile or tary longer ȝe effecte of ȝe cure. (Power, *AFS*, 22/8–14)

This is followed by a detailed description on how to put the patient in bed and instructions for the surgeon's assistant.

As regards the operative stage, it is a fundamental part of the surgical instruction as it explains what steps should be taken during the operation. This part is usually marked by a linking particle *þanne* which is put directly after the headings expressed by conditional clauses, cf.:

(7)
(a) & if þe enpostym schewe wiþoutforþ, **þanne** <u>opene</u> it wiþ an instrument (…) (Fleischhacker, *LSC* 220/5–6)
(b) If a man be wounded in his stomak þe wounde of þe wombe wiþoutforþ ne be not brood, **þanne** <u>kutte</u> it more & þanne sewe þe wounde (…) (Fleischhacker, *LSC* 169/33–35)
(c) If þer come an enpostym or ony swellynge to a mannes tunge, & it come of hoot humours, **þanne** <u>þou schalt</u> bigynne þe cure þerof in þis maner (…) (Fleischhacker, *LSC*, 262/19–21)
(d) If þer be ony nerues, or arterijs, ouþer veynes kutt ouerþwert, **þanne** <u>þou schalt</u> worche (…) (Fleischhacker, *LSC*,160/15–16)
(e) If it be so þat þe guttis be colde, and þe guttis (…), **þanne** <u>þou must</u> sutilli make þe wounde (…) (Fleischhacker, *LSC*, 170/11–14)

As seen in the examples above, the particle *þanne* is followed either by imperative forms of verbs (cf. *opene*, *kutte* (7a) and (7b)) or by modals of obligation (*shall*, *must*) that are preceded by a subject *þou*, cf. (7c)–(7e). The form *þou schalt* is the most frequent element in the examined material. Apart from the examples with a linking particle *þanne*, the second most common opening element of the operative part is a verb in the imperative, cf.:

(8)
(a) And if þere be a synwe kutte, **brynge** þe parties of þe synwe togedyre (MEMT, *LSC*, f. 84b)
(b) And if þat þe woude were y-mad in þo parties with an arwe oþere knyff, oþere(…), **drawe** hym out (…) (MEMT, *LSC*, f. 84b)
(c) If the wounde be so gret that the byndyng suffice not, **sewe** the wounde with a squar nedyll (…) (MEMT, *LChP*, f. 21v).

Verbs in the imperative or *þou schalt* form are also commonly found after the headings expressed by a structure other than a conditional clause, cf. earlier examples (3a)–(3h). In such cases, the linking adverb *first* is often inserted, e.g.:

(9)
(a) Þe cure of an hoot enpostym in þe tetis / **ffirst** þou schalt (…) (Fleischhacker, *LSC*, 266/6–7)

(b) Þe firste cure of þis enpostym is, **first** þou schalt (…) (Fleischhacker, *LSC*, 223/31–32)

The post-operative part includes instructions on pain management and wound care. Usually, the post-operative care begins immediately after surgery and involves the application of closing and preventive medicines. The former promote tissue growth, e.g. astringent medicines (*consouder* or *souder*, cf. (10a) below) "þat makiþ þe lippis of a wounde soude togidere" (Fleischhacker, *LSC*, 344/30) and cicatrizant medicines (*consolidative*, *incarnative*, *solidative*) "þat makiþ hard fleisch to arise in þe stide of skin" (Fleischhacker, *LSC*, 344/32-34). The preventive medicines (e.g., *defensive*, *preservative*, cf. (10b) below), on the other hand, maintain health and protect from infection.[5] Also, there are some directions on how to improve the recovery. For instance, the patient should feel comfortable and have some rest (10b) and (10c), and should avoid certain types of food (10d).

(10)
(a) Whanne þou hast sewid þe wounde bineþe as it is aforseid, <u>þanne springe þeron poudre consolidatif & soude þe wounde</u> of þe stomak, holde open þe wounde of þe skyn wiþoute, til þe wounde of þe stomak be hool. (Fleischhacker, *LSC*, 170/2–5)
(b) & <u>þe pacient schal be kept from akynge </u>wiþ good kepinge & wiþ reste, & <u>he schal ligge</u> in an euene bed. & þou schalt <u>leie aboute þe wounde a defensive</u> of bole & of oile of rosis (…) (Fleischhacker, *LSC*, 160/18–21)
(c) & loke <u>þat he haue scielence & good reste</u>, & þat he trauaile not (Fleischhacker, *LSC*, 164/27–28)
(d) Also <u>þou schalt forbade him wijn & fleisch & al maner swete</u> metis þat engendrid blood or colre. (Fleischhacker, *LSC*, 228/12–14).

The post-operative part is an optional stage and its insertion seems to depend on the type of surgery. Hence, it is not recorded in all surgical instructions examined for the present paper.

In addition to the passages that instruct how to deal with the most common surgical problems, the authors of the texts sometimes add the descriptions of unusual or challenging operations that they once performed. One such surgical procedure is recorded in Lanfranc's *Science of Cirurgie* (Fleischhacker, *LSC*), in the section devoted to the apostemes of the neck and throat. The author starts with the introduction of the patient (a lady of Milan) and her medical problem, i.e. an internal and external swelling on her neck, cf.:

(11) I wole sette in þis place a cure þat bifel in þe cite of mediolanensis of a ladi þat was .L. wynter oold, & hadde a squinacie of fleume þat occupied al hir necke tofore wiþinne & wiþoute (…), & þe woman miȝte not speke, ne swolowe in no mete. (Fleischhacker, *LSC*, 220/23–25 and 221/1–2).

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5   For more on medicaments used in medieval England see Sylwanowicz (2018).

We are also informed that the patient was unsuccessfully treated by a young man who decided to ask his teacher, Lanfranc, for help. This introductory passage is followed by the procedure part, in which Lanfranc examines the patient (pre-operative stage, example (12a)), then opens the aposteme with the razor (operative stage, example (12b)) and finally he cleans, dries and closes the wound (post-operative stage, example (12c)).

(12)
(a) Þan I tastide hir pous, & it was wonder feble (...), & I knewe wel þat (...) þe matere was so greet. (Fleischhacker, *LSC*, 221/6–10)
(b) & þan I took a rasour (...), & þere I made a wounde, & þere I drowe out matere þat was corrupt, & it was foul stynkynge matere, & al miȝte I not avoide anoon. (Fleischacker, *LSC*, 221/10–15)
(c) & whanne þe wounde was maad clene I driede it vp & soudide it, & in þis maner þe pacient was maad hool. (Fleischhacker, *LSC*, 221/27–28).

Apart from such case reports, the author confirms his expert status in surgery by adding critical comments on unskilled physicians who failed to cure their patients because they had not followed Lanfranc's teachings, cf.:

(13) I haue seen ful manye lechis þat hadden greet name in cirurgie þat founden cancris in men (...) & miȝte ful long tyme haue lyued if he hadde kept aftir my teching in þis book. (Fleischhacker, *LSC*, 232/3–6)

4. Linguistic features

Apart from well-structured organization of the text, surgical instructions should be clear and communicative so that the reader could easily follow the directions. According to Werlich (1976) this can be achieved by language internal features that are expected in the instructive texts, i.e. "the use of commands or requests, first- or second-person point of view, topical coherence, topic-giving instructions, and a text structured either analytically or like a list" (Werlich 1976: 122–125; after Carroll 2004: 178). The examination of the surgical instructions has revealed that these texts exhibit linguistic features that are characteristic of the instructive texts, and which enable easy identification of particular stages of the surgical procedure described in the text. What follows is a discussion of the linguistic elements that appear recursively in the examined material, i.e.: forms of the verb, temporal sequencing and the use of pronouns.

4.1. Form of verbs

The most common form of verbs which are recorded in the examined material are imperatives, which is in accordance with Werlich's (1976) definition of instructional texts which is realised by sentences in imperative

forms. Within this group we can identify the following structures: verb + noun (e.g. *bynde þe nose*, *sette a ventuse*, *sewe þe wounde*), verb + pronoun (e.g., *kutte it*, *sowe hem*, *staunche hym*), and causative phrases with *let/make* (e.g., *let þe wounde be consoudyde*, *lete hem dreyȝen*, *make þe wounde blede*). Another group of verbs are modals of obligation (especially *shall* forms), which are almost equally represented as imperatives. Both structures (imperative and modal), as indicated in section 3.2, mark the opening of the operative-stage in the procedure section (cf. earlier examples (7a)–(7d) and (8a)–(8c)), and they recur in the remaining parts of the text, cf.:

(14)
(a) Þis is þe cure of ficus þat comith of fleume: þou **schalt binde** him wiþ a þreed, ouþer **kutte** him al awei, & þan þou **schalt soude** it as it is aforseid in oþere placis. (Fleischhacker, *LSC*, 288/7–9)
(b) Þe woundes þat beþ y-mad in oþere partye of þe face (...), **brynge** hem togidre, **sowe** hem, & **cure** hem (...). An þou maiste maken a sowing in þe face. (MEMT, *LSC*, f. 82a)

The next group of verbs, though rare, is represented by passive voice structures. They allow to avoid personalised references and such constructions are often found in the fragments where it is necessary to focus on a procedure and not on an agent of the sentence (cf. Alonso-Almeida 1999: 64). For instance, in the following example (15), the focus is on two types of bandages (ME *band* n., Norri 2016) that are used in the treatment of nose injury.

(15) And þilke <u>bande</u> þat ys vnder þe nose þat halt þe nose vpwarde, schal **be knett** abouen on þe hed, and aftirwarde he schal **be turnyde** twarte offere þe forehed (...). And þe <u>bande</u> þat **ys leyde** aboffe þe nose, schal **be bounden** behynden in þe nolle. (MEMT, *LSC*, f. 82a).

Additionally, passive forms are found in the headings, especially those expressed by conditional clauses (cf. earlier examples (2a)-(2e) in section 3.1).

4.2. Temporal sequence

Chronological sequencing of information is a strategy that assures a clear guidance through the content of the text. This step-by-step organization of the text is especially important in the description of actions performed during the surgical operation. In the examined material, the authors frequently make use of temporal adverbs: *first*, (*and*) *then*, *after(wards)*, *when*, or a perfective aspect, especially in the clauses introduced with *when*. Such clauses often mark the beginning of the post-operative stage of the surgical procedure.

(16)
(a) **First** þou schalt make þe pacient sitte vpon a stool tofore þee, & þou schalt sitte a litil hiȝer þan he (...), & **þan** þou schalt haue in þi mouþ a fewe braunchis of

fenel (…), **& þan** þou schalt blowe in his iȝe .ij. siþis (…), **þan** þou schalt haue an instrument of siluir, schape in the maner of a needle, **& þan** þou schalt bigynne aforȝens þe lasse corner of þe iȝe (…), **& whanne** þou seest þe point of þe instrument vndir þe corn, **þan** lete þe point of þin instrument (…). (Fleischhacker, *LSC*, 251/9–19)

(b) make a point by þe space of a litel fyngere from þat on ende of þe wounde, & an oþere point at þe oþere ende of þe wounde, (…); **& afterward** a point on eiþere syde of þe nose, **after warde** make a point between evyry point (…). (MEMT, *LSC*, f. 82a)

(c) And **whan þou hast broken** þe place þat þe water was ynne, **þan** presse it adounward (…) (Fleischhacker, *LSC*, 251/21–22)

(d) **Whanne þou hast sewid þe wounde** bineþe as it is aforseid, **þanne** springe þeron poudre consolidative (Fleischacker, *LSC*, 170/2–4)

The examples also reveal that the authors relied on short clauses, often joined with the conjunction *and*. As a result, the instructions are straightforward and easy to follow.

4.3. The use of pronouns

Earlier studies on the use of pronouns in early instructive texts have revealed that, contrary to modern scientific texts that are often depersonalised, avoid emotive elements and rely on passive constructions, personal pronouns constituted an important feature of Middle English texts (Alonso-Almeida 1999, Taavitsainen 2009). For instance, in the medical recipe collections the 2nd person possessive pronouns were frequently used to establish a familiar and intimate relationship with the potential reader, whereas personal pronouns *I* and *you* (2nd person singular) gave the text a more authoritative voice. The use of these pronouns depended often on whether the instructive texts were used in the collections aimed at the learned or non-learned audience (cf. Sylwanowicz 2017).

In the surgical instructions gathered for the present paper their authors usually put themselves in the position of the instructor. Hence a frequent use of the 2nd person *you*, cf.:

(17)
(a) þan **þou** schalt brenne þe place wiþ an hoot iren or wiþ gold, & þan **þou** schalt fulfille þe cure as it is aforseid (…) (Fleischhacker, *LSC*, 231/22–24)

(b) In a hoot enpostym of þe ȝerde or of þe balloki, **þou** schalt lete him blood (…)/ Also **þou** schalt forbade him wijn (…). Þan **þou** schalt leie þerto medecyns to putt awei þe mater (…) (Fleischhacker, *LSC*, 228/10–14)

(c) and after foure days sowd the wounde and hele all thynges **after thi wit**. (MEMT, *LChP*, f. 25v)

Sometimes, as in example (17c), the author assumed that the reader of the text was an experienced medical practitioner and left the decision about the final stages of cure to the user of the instructive text.

A similar authoritative voice is reflected by means of the pronoun *I*. The instances of this pronoun are usually recorded in the fragments in which the authors describe some challenging surgical cases that they successfully performed, or when they comment on the work of other practitioners, cf. earlier examples in (12) and (13) in section 3.2, and the following:

> (18) Summen seien þat þe smale guttis moun be sowdid in þis maner: make a pipe of elder, & putt wiþinne þe gutt, & þanne soude þe gutt þer vpon. & **I seie** þat it is not sooþ, for þis þing, þe smale guttis wolen not soude, & to þe greete guttis þis queyntise is nouȝt; þerfore triste to þe maner þat is aforseid. & take kepe of þe perels þat ben forseid. (Fleischhacker, *LSC*, 170/32–37)

In the above fragment, dealing with wounded intestines, the author disagrees with the procedure proposed by other practitioners. In addition, he underlines the fact that his treatment should be trusted and directs the reader to follow the instructions described earlier in the text.

5. Conclusions

This study has shown that Middle English surgical instructions have a well--defined structure, which is consistently used in the examined material. These instructive writings are divided into two main parts: the heading and the procedure. The first indicates the beginning of the instruction, whereas the latter is a detailed description of the series of steps to be taken before, during and after the surgical operation. The surgical instructions are usually found within long and exhaustive treatises on human anatomy, therefore the parts of the instructive passages on how to deal with injuries are marked by recurring linguistic features that allow the reader to easily identify surgical instructions in the texts. For instance, most headings are expressed by means of conditional clauses. The procedure part is characterised by a frequent use of verbs in imperative form and modal verbs of obligation. In addition, temporal adverbs ensure a step-by-step organization of the text. Although modern surgical instructions are depersonalised, the authors of Middle English texts often make use of personal pronouns, especially the 2nd person singular *you* and 1st person singular *I*, which gives an instructor-like, authoritative voice to the text.

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