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The Vocabulary of Tocharian Medical Manuscripts

Gerd Carlung

Abstract

This paper will give a survey of the Tocharian medical vocabulary as known from fragments of manuscripts preserved in Buddhist monasteries along the Northern route of the Silk Road. The origin of the medical vocabulary reflects the influx of loanwords and cultural influences from neighbouring languages as well as the written *lingua franca* of the region, Sanskrit. However, different parts of the vocabulary reflect different types of vocabulary, e.g., indigenous words, calques, loan translations or borrowings. Tocharian medical texts represent, in almost all instances, translations from Sanskrit. This has of course influenced the vocabulary, even though traces of an indigenous tradition can be found in the vocabulary.

Keywords

Tocharian, Tocharian A, Tocharian B, Tocharian medicine, materia medica

The Tocharian Language

Tocharian A and B are two closely related languages which were spoken in the Tarim Basin, probably up to the thirteenth century CE. They are known from manuscripts and wall paintings, found mainly in cave monasteries in the ancient cultural areas of the northern fringe of the Tâklimakan desert: the Maralbashi, the Kuchâ-Qyzyl, the Yanqi-Agni, and the Turfan-Chotscho areas. Tocharian B or "West Tocharian" documents are found at all sites, in total around 3,200 documents, and Tocharian A or "East Tocharian" is found only at sites in the east, in all around 1,100 documents. Some of the Tocharian B texts (caravan passes) can be linguistically dated with certainty to the first half of the seventh century CE. Through the dating (using C_{14}) of Professor Grootes, of the Christian-Albrechts-Universität in Kiel (see Tamai 2005), Tocharian A and B manuscripts can be dated from the fourth to the thirteenth century CE, with a concentration around the fifth to ninth centuries. Tocharian texts are mainly of Buddhist nature and they represent—with the exception of a handful economic and administrative documents—translations from Sanskrit, even though there was an independent literary tradition. The Northern route of the Silk Road passed through the Tocharian cities, transferring goods

and cultural influences to and from the Tocharian area. The medical literature, which is one of the areas of Tocharian literature, reflects this influence.

The Tocharian medical literature

The Tocharian texts of medicine have their place within the framework of Central Asian Buddhist medical literature, which traces its roots back to the Ayurvedic medical tradition but which has its own distinct methods and purposes.

The number of published Tocharian medical texts is around 70, mostly in Tocharian B (or Kuchean). These texts are found in the collections of Hoernle, and Stein and Weber,¹ Turfan collection² and the Pelliot collection preserved at the Bibliothèque Nationale de France.³ Among the unpublished texts we find manuscripts also in Tocharian A (or Agnean). These fragments belong to the Pelliot collection and are being prepared for eventual publication by Professor Georges-Jean Pinault in Paris. A handful of magical texts in the unpublished material, mostly in Tocharian B but some of which are in Tocharian A, should also be mentioned here, especially as their contents partly overlap with those of the medical texts such as, for instance, prescriptions with enumerations of particular ingredients.

Most medical texts are very fragmentary, often with more than 50 per cent lost. For a large number of the texts, the contents and possible parallel texts in Sanskrit, Khotanese or Tibetan are not known, basically because of the large lacunas and the poor understanding of the translation of the preserved parts. A couple of fragments are almost perfectly well preserved. This is the case with the three documents PK.AS 2A, 2B and 2C, bilingual Sanskrit—Tocharian B, which contain parts of the *Yogāsataka*. The contents of these texts can be reconstructed and translated with great certainty and parallel texts can be found in Sanskrit, Khotanese, and Tibetan. From these fragments it can be observed that the Tocharian texts provide a relatively free translation in relation to the Sanskrit original, which is given in the text. If other parallel source texts could be identified, we might find this feature in other Tocharian texts also. Normally the information in the Sanskrit texts is expanded by practical

¹ Broomhead 1962.

² Sieg and Siegling 1953. The texts are available on <http://titus.fkdg1.uni-frankfurt.de/texte/tocharic/tht.htm>. [last accessed: 01/10/07]

³ For texts and translations, see Filliozat 1948.

information in the Tocharian translation, as in the following example from the *Yogāsataka* (italics represent extensions of the Tocharian translation):

PK.AS.2B b1-6 *rāsnārābhaphalar* [i]k[ā]m[ra]latātyuk <p>*añcamulī balā māmsak-vābhayutah satatālanamāno · kṣo dhānṣāscarpingudah puspābhūgahambhivakūṣṭha phalīni kṣmāvacākalikto · vasti kāncika nuradugṭha sahīto vātāmajyebhy hitam | kleṃkaryo · madanaphal · rṣphāl · gurūci antapi witsakam bal missa pepakruva · kuñcībhāse śalyave · sābhī mit · puñtī : peṣke cauitām : pissau · pilamātri · kuṣsu · pippāl okaro · kāñcī · kewīye mīśosa māḷkersa wat nastukārm nirubam yamaṣṭe yentṣana tekan-maṇe kurtse · suwisa yāmān nana kartse*

‘*Wish* Vānda roxburghii, fruit of the *Randia dumetorum*, three myrobalan, *Tinospora cordifolia*, twice the (five) roots, *Sida cordifolia*, meat bouillon, sesame oil, salt, honey, molasses, clarified butter, honey, anise, *Aegle marmelos*, long pepper, *Acorus calamus* and rice-vinegar, with cow urine or milk, a nasal medication [or a mouth washing should be administered]; it is good for wind diseases. *If one takes it with bouillon, it is also good.*’

Layers of loanwords in the Tocharian vocabulary

The source languages

Beside the indigenous vocabulary, i.e. words whose Indo-European etymologies are certain, Tocharian has a number of loanwords from neighbouring languages. This is particularly prominent in the medical vocabulary, where most of the special terms have their origin in Middle Indo-Aryan or Sanskrit. However, other languages occur as well. Before we go into detail, a general survey of the origin of loanwords in Tocharian will be presented.

Chinese and Turkic borrowings are found already in the Proto- or Common Tocharian period (that is, in rough outlines, from 400 BCE–0), up to the period of Tocharian A and B (in the fifth–ninth centuries CE). The number of borrowings from the early period (from Old Chinese and Proto-Turkic) is not great and words of this type that occur in the medical vocabulary (as Tocharian AB *klm* ‘rice’) occur outside the medical text corpus as well (cf. Medical ingredients).

More common in the medical vocabulary are the Iranian loanwords that originated in a linguistic exchange during the period lasting from Common Tocharian to Pre-Tocharian A and Pre-Tocharian B. First, at a very early date (approximately 500–400 BCE) a handful of Old Iranian or Proto-Ossetic loanwords entered the Tocharian lexicon. However, there are no examples of this in the medical vocabulary. Later, we find Bactrian, Sogdian and Khotanese

borrowings that entered the Tocharian language prior to the split into Tocharian A and B or at an early stage of Pre-Tocharian A and Pre-Tocharian B.⁴ The borrowings from Indo-Aryan, i.e. various stages of Middle Indo-Aryan and Sanskrit are numerous in the medical vocabulary. These borrowings can be divided into chronological layers: 1) Gāndhāri, 2) Middle Indo-Aryan, 3) Buddhist Sanskrit. Unfortunately, relatively little research has been done on this linguistic exchange.⁵

In the next section, examples from each group, selected from Tocharian medical manuscripts, will be analysed. The vocabulary will be divided into three, according to very fundamental semantic spheres of medical texts: *body parts, diseases and medical ingredients*. Occurrences in medical manuscripts will be given in square brackets.

Grouping loanwords through relative chronology

In the various stages of Proto- or Common Tocharian or Pre-Tocharian A and Pre-Tocharian B, the influx of loanwords can be divided into layers by the relative chronology of the sound changes. In the medical vocabulary, this is particularly noticeable in the Indo-Aryan borrowings, where the gradual cessation of the process of devoicing and de-aspiration of voiced and aspirated stops into voiceless non-aspirated stops (**d*, **dh* > **t*; **g*, **gh* > **k*, **b*, **bh* > **p*.) can be observed.⁶

In early borrowings we find devoicing/ deaspiration of stops in all positions, e.g., B *pilamāti* ‘centre of the fruit of the Aegle Marmelos’ Skt. *bilvamadya-* ‘the flesh of the Bilva fruit’.⁷ [*pilamāti* PK.AS.2A a4, *pilamāti* PK.AS.2B b5, W 7 a5, *pilamaddhyi* (which belongs to the next group, ‘Later borrowings’) PK.AS.9 a6.]

In later borrowings we find no devoicing/ deaspiration of stops initially, e.g., B *bhākotār* ‘portion’ Skt. *bhāgotanam*, Khot. *bhyāñā* ‘a portion that should be increased accordingly’.⁸ [PK.AS.2A b3.]

In the latest borrowings, we find no devoicing/ deaspiration of stops in any position. This is found for instance in A *abhidārm*, B *abhidārm*, *abhidārm* Skt. *abhidharma-* ‘name of the third section of the Buddhist canon’.⁹ This

⁴ See Winter 1971; Isebaert 1980; Schmidt 1985; Pinault 2002.

⁵ Cf. Carling 2005, 60–4.

⁶ Cf. Ringe 1996:§3. For further details, see Carling 2005, pp. 63–4.

⁷ MW:732a.

⁸ See Emmerick 1980, Carling 2003a, pp. 46–7.

⁹ See Adams 1999, p.17, BHSD, 51a.

is not a medical term (no perfect example was found in medical vocabulary). A corresponding example from the medical vocabulary, representing the same group, is B *aruci* Skt. *aruci* ‘want of appetite, disgust’ [PK.AS.2C b3].

The medical vocabulary

Body parts

A fundamental part of the Tocharian medical vocabulary is the body parts, mentioned either as affected directly by a disease, e.g.,

[o]ñi[ne] (ānrene) [ai] indrine anamsne piš yikene lakle wikāsām [PK.AS.2A a6]

‘this destroys a five-fold pain in the hip, (the shoulder), the organ of the abdomen and the heart’.

Or as indirectly affected, i.e., as being affected as the result or symptom of another disease, e.g.,

lamtse koyne sek mäsetür (anäsälhetse mäsetür walke) perpette premare re anikain yamalle yp mebyi taitki mäsetürtrü · iwate kekserinne mäsetür-ne tri[k](au) (nikauñ sek spanese) prebe mäsetür-ne · šwätsi nā ānne somokhäññe sosoyusa keksetüre mäsetür(-ne · te-namē nauš šetri pearsa)so kuwürmatse lešpašepi [IOL Toch 306 a1–4 a1]

‘He always becomes bitter in the mouth, (likewise he becomes breathless) as if carrying a burden, vomiting, and his nostrils are blocked [i.e. he has a nasal catarrh]. Anxiety [nausea] besets his body, he (is) confused (and] by day) time (for sleeping constantly) comes up for him. He has no desire to eat and constantly his body is satiated. Know (this mentioned before as signs) of a cancer due to phlegm.’

Translating body parts can be, surprisingly enough, a complicated matter. The reason is that body parts, with only a few exceptions, seem to be inherited Indo-European words, not borrowings, at least not from any of the known neighbouring languages. Many of them occur only in medical contexts, and here sometimes just once or twice. In these cases, the translation can only be secured by parallel texts in Sanskrit or some other language and not by uncertain etymologies. Nevertheless, several of the body parts lack good Indo-European etymologies, e.g.,

Tocharian B *to** = Skt. *kuksi-* ‘[lower] abdomen, womb’.¹⁰ [PK.AS.2A a6, IOL Toch 205 b5.]

¹⁰ For details and text samples, see Carling 2003b, pp. 86–8.

or:

Tocharian B *krāñi* = Skt. *marjā-* 'spine, nape of the neck'.

triwāle melampne lakle se mukca pañku · krāñi uicakaine · pokaine āsne ekanene · korne klauksaine · sark alāskemane = Skt. ghrāñ-āya-mānyā-hanu-pṛṣṭa-bāhu-śīro-'kai-kañṭha-śravaranūyeyu. [PK.AS.2B a3–4].¹¹

Even if we would suspect indigenous Indo-European lexemes for the body parts, borrowing cannot be excluded:

For example: B *oñi* = Skt. *śronī* 'the hips and loins, buttocks'.¹² [PK.AS.2A a6.]

Pinault compares this form to Skt. *āñi-* 'limb-pin, peg, bolt' or: 'the part of the leg just above the knee'.¹³ Pinault assumes that both words are borrowed from an **āni* meaning 'hip' Proto-Toch. **āni*. Since *āni* is already attested in Vedic Sanskrit, supported by the fact that the sound change Proto-Toch. **ā* > Toch. B *o* [A *a*] does not apply to later Indo-Aryan borrowings (cf. below), we must assume a very early take-over from some Central Asian language different from Tocharian and Indo-Aryan.

Diseases

With diseases or other ailments, it is a somewhat different story. Here we have indigenous terms in addition to calques, loan translations and borrowings, which can be extended by an indigenous suffix.

As concerns indigenous words, it is sometimes difficult to judge whether they have been influenced by the Sanskrit equivalents, or if they represent terms that were used and known before the influx of Sanskrit already, e.g.,

B *klaiñe-teki* (lit. 'female disease') = Skt. *astgdara-* 'irregular or excessive menstruation, menorrhagia'.¹⁴ [PK.AS.2A a1.]

B *po-pok* (lit. 'whole steadiness') = Skt. *stimitatva-* 'steadiness, fixedness'.¹⁵

In other instances, we have to do with obvious loan translations, mostly from Sanskrit, as in

B *aranśae mā astarāñe* ('in the heart not pureness') = Skt. *hrdayāvisuddhi-* 'impurity of the heart'. [PK.AS.2C b3.]

¹¹ Cf. Adams 1999, p. 214.

¹² MW:1102c, Carling 2003a:48, 64.

¹³ Pinault 2003.

¹⁴ MW, p. 121c.

¹⁵ MW, p. 1258c.

Even more frequent are calques of Sanskrit terms, e.g.,

B *krāupalāne* = Skt. *samghāna-* 'phlegm'. B *krāupalāne* means literally 'gathering, assembling', from *krāup-* 'gather, amass, herd',¹⁶ formed on the pattern of Skt. *sam-ghāna-* 'collection, cluster, heap, mass, multitude'.¹⁷ [PK.AS.2C a5.]

B *pkelāne* = Skt. *vīpāka-* 'bad digestion'. B *pkelāne* means 'ripening, cooking', from *pāka-* 'cook, boil, ripen',¹⁸ formed on the pattern of Skt. *vīpāka-* 'cooking, ripening', from *vi-pac-* 'cook thoroughly'.¹⁹ [PK.AS.2C a2.]

B *tute nesalāne* = Skt. *pītabhāva-* 'having yellow colour'.²⁰ B *tute* means 'yellow' and B *nesalāne* 'being' from *nes-* 'be'. [PK.AS.2C a2.]

The names of some diseases are pure borrowings, basically from the Sanskrit, e.g.,

B *pañku* 'lame' Skt. *pañgu-* 'lame, crippled in the legs'.²¹ [PK.AS.2C a3.]

A borrowing can be expanded by an indigenous suffix, e.g.,

B *alāsāññāne* = Skt. *ālasya-* 'idleness'. The suffix B *-(ñ)ñe* (A *-ñi*) forms abstracts nouns.²²

Medical ingredients

The terms for medical ingredients represent a mixture of indigenous words and borrowings in different stages from neighbouring languages. Unlike the diseases, the medical ingredients rarely represent calques or loan translations.

Indigenous words are found among the basic ingredients used for medical purposes or in medical recipes, e.g.,

B *malkever* A *malke* 'milk'. [B: many occurrences²³ A: PK.NS.2 b1, PK.NS.3 a2.]

B *keviye miso* A *kovi wāñc** 'cow urine' (the translation of A *wāñc** as 'urine' is new²⁴ and caused by a passage of the text PK.NS.3 a1.²⁵ [B: PK.AS.2B b5, A: PK.NS.3 a1.]

¹⁶ Adams 1999, pp. 219–20.

¹⁷ MW, p. 1130a.

¹⁸ Adams 1999:368.

¹⁹ MW, p. 973ab.

²⁰ Cf. MW, p. 629c.

²¹ MW, p. 574c.

²² Cf. Krause and Thomas 1960, § 219.

²³ Cf. Filliozat 1948, p. 212.

²⁴ Cf. Poucha 1955, p. 286.

²⁵ See Carling *et al.* forthcoming.

The loanwords from Sanskrit outnumber all the preceding groups. Furthermore, they represent different stages of the Pre-Tocharian B and Pre-Tocharian A languages, as mentioned earlier. There are numerous examples of medical ingredients, the origin of which can be more or less easily traceable to Sanskrit, e.g.,

B *ayājīni* 'cumin' =/Skt. *ajājī-* 'Cuminum Cyminum'.³⁸ The B form might be either a wrong sanskritization of a Middle Indo-Aryan form or borrowed from Sanskrit directly. [PK.AS.2A b3.]

B *bal* =/Skt. *balā-* 'Sida Cordifolia'.³⁹ The form is a straightforward borrowing from Sanskrit with loss of the final vowel. [PK.NS.2B a4, a6.]

A *āragvat* Skt. *āragvada-* 'drum stick'.⁴⁰ [PK.NS.2 a2.]

A *sāncapo*, B *sāncapo* Skt. *sāncapā-* 'the tree Dalbergia Sisso'.⁴¹ The A form is most likely a borrowing from B, but the B form remains obscure, cf. Middle Indo-Aryan, Pk. *sāva-*.⁴² [A PK.NS.2 a2, B W 36 b2.]

The fact that so many Sanskrit borrowings also are represented by the same word as the Sanskrit equivalent (for instance, as in the Yōgāsātaka bilingual) raises the question whether some of the borrowings were borrowed and adapted directly, i.e., in the contexts of translating the text from Sanskrit to Tocharian.

Summary

The Tocharian medical vocabulary represents a mixture of indigenous words, calques, loan translations and borrowings, where indigenous words (or, rather, indigenous words and words with no satisfactory etymologies) predominate among the terms for parts of the body affected by diseases while calques and loan translations predominate among names for diseases, and borrowings are more numerous among the ingredients used in medical recipes. The great number of borrowings, in particular from Sanskrit, is not surprising. The Tocharian medical discipline as practised, taught and learned by monks in the monasteries was heavily influenced by the Indian tradition. The texts all had Sanskrit originals and the translation and adaptation of this literature to a Tocharian context meant that new concepts, new diseases and new ingredients

³⁸ MW, p. 10a.

³⁹ MW, p. 722c.

⁴⁰ Zieme 2003, pp. 158–9.

⁴¹ MW, p. 1069c.

⁴² CDIAL, p. 719.

One of the most basic ingredients in medical mixtures, but which also often occurs outside the medical literature, is of Old Chinese origin:

AB: *kiu* 'rice' Mod. Ch. *dào*, Mid. Ch. **lauX*, Old Chin. *C-luu- 'rice, rice-paddy'.²⁶

B: several occurrences, in particular in the adjective *kiuše-*, *kiuša-* = Skt. *tanḍulā-*, *tanḍulīya-*, *tanḍulaka-* 'of rice'.²⁷ [A: PK.NS.3 a2.]

However, these basic ingredients occur frequently in other non-medical texts as well. Therefore, they cannot be regarded as belonging to the medical vocabulary exclusively. This indicates that we cannot connect the medical tradition to lexemes borrowed at earlier stages, i.e., to the time before the influx of Buddhist ideas and concepts.²⁸

A handful of ingredients are of Iranian origin, e.g.,

B *tuānkaro* = Skt. *nāgana-*, *śuñḥī* 'ginger' Middle Iranian *(*u*)*vamkar*, Khot. *tuungara*, *tuungana-*.²⁹ [PK.AS.2A a2, b2, PK.AS.3B b5, also adjectival derivations]

B *kuñcit*, *kuñcīt*, A *kuñcīt* 'sesame' Khot. *kuñjsata*.³⁰ [B: several occurrences and derivations,³¹ A: PK.NS.2.]

A part of the vocabulary has its origin in Middle Indo-Aryan, in particular Gāndhārī, which has a number of distinct features that recur in the Tocharian borrowings. For other loanwords, the origin is obviously Middle Indo-Aryan, but the exact details are somewhat more complicated to reconstruct.³² As examples of Middle Indo-Aryan borrowings, one may mention:

B *sakḥār* A *sakri* 'sugar' Middle Indo-Aryan, cf. Pkt., Pali *sakḥarā*, Shina (Dardic) *śakar*, Kohistani (Dardic) *śakhar*,³³ Skt. *śarkarā-* 'ground or candied sugar'.³⁴ [B: several occurrences,³⁵ A: PK.NS.2 b1.]

Toch. B *puśō* '(root of the) Saussurea lappā' = Skt. *puṣkanamūla-* (*puṣkara-* 'lonus; Costus Speciosus'³⁶ and *mūla-* 'root' Middle Indo-Aryan, Pkt. *puśa-*, Pali *puśā-* 'flower', from Skt. *puṣya-* 'vigour'.³⁷ [PK.AS.2A b3]

²⁶ GSR: 1078.

²⁷ Cf. Adams 1999, p. 225; Lubotsky and Starostin 2003, p. 262.

²⁸ For a chronology, cf. Carling 2005.

²⁹ Isebaert 1980, p. 59.

³⁰ See Adams 1999, p. 182.

³¹ Cf. Filliozat 1948, p. 118.

³² For discussion, see Carling 2005, pp. 62–4.

³³ CDIAL, 715a.

³⁴ MW, p. 1058b.

³⁵ Cf. Filliozat 1948, p. 135.

³⁶ MW, p. 638c.

³⁷ CDIAL, p. 470b.

had to be introduced into the Tocharian language. Further, most of the ingredients, coming from plants and herbs of various kinds, did not grow naturally nor had they been introduced into the day Central Asian environment—they were imported from India (or elsewhere) and together with the import the terms were borrowed into the language.

More interesting is how free the Tocharian translation sometimes is in relation to the Sanskrit original. Apparently, the Tocharian monks developed a tradition of their own, which was more directed towards practice than theory. This means that the additions deal much more with methods of curing than causes of the diseases. The borrowings from Middle Indo-Aryan, and also, to a certain extent, Iranian languages that were spoken in various dialects in the area, indicate that the influx of new terms and practices did not only originate in written Sanskrit sources (corresponding to Greek and Latin in the Western medical tradition) but was also accompanied by an oral tradition, where local practices and local dialects had the opportunity of playing a role.

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Abbreviations:

- BHSD = Edgerton, F. 1953, *Buddhist Hybrid Sanskrit Grammar and Dictionary*, Vol. II: Dictionary, New Haven: Yale University Press.
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