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Discussion Kernel

Surgical practice and Ayurveda: A realistic analysis of the current debate

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ABSTRACT

The recent notification issued by the Central Council of Indian Medicine making it compulsory for the postgraduate students of two streams of Ayurveda (Shalya Tantra and Shalakya Tantra) to be trained in different kinds of modern surgical procedures as a part of their curricula has led to a nation-wide debate. While practitioners from biomedical sciences are voicing their concerns against the decision, Ayurveda professionals are seen defending the same. In this article we try to look at this issue from a dispassionate and realistic point of view. We recount the historical milestones that paved way for the incorporation of the modern surgical practices in to Ayurveda curricula. Currently though there are many skilful Ayurveda surgeons who practice surgery in India, the standard of education in many Ayurveda colleges is very poor because of a low patient turn-out which is a matter of serious concern. We argue that, however, by citing these varying standards in education, imposing deliberate restrictions on Shalya-Shalakya students and not giving them access to treat patients too is unwarranted. Such a move can affect the research potential in these fields. We cite the history of the evolution of Kshara-Sutra therapy to justify our argument. Further, we delve into the issue of prospective and retrospective applicability of the said notification and suggest a few options that the Ministry of AYUSH may consider to resolve this issue. We conclude by saying that well-trained Ayurveda surgeons must be allowed to practice surgery, but at the same time, a blanket license to all Shalya-Shalakya postgraduate degree holders to practice surgery without ensuring their actual clinical training would be unreasonable.

Recently a gazette notification was issued by the CCIM (Central Council of Indian Medicine) making it essential for *Shalya Tantra* (branch that deals with Ayurveda surgery) and *Shalakya Tantra* (branch that deals with Ayurveda ophthalmology, Eye, ENT and Dentistry) postgraduate students to be competent enough to independently perform a number of modern surgical procedures listed in the notification [1]. Since then varied debates have surfaced both in favour and against this move [2,3]. In this communication we put forth certain relevant facts and provide a few suggestions that the Ministry of AYUSH might consider implementing.

1. History of surgery in Ayurveda

In Sushruta Samhita, originally written by Sushruta (~600 BCE), detailed explanations of surgical instruments, different types of incisions, different suturing and bandaging techniques, fracture reductions, techniques of foreign body extraction, and surgical management of obstructed labour are found [4]. The original textbook written by Sushruta was later redacted by Nagarjuna (400–500 CE) and was amended by Chandrata thereafter (10th century CE). Banaras (Varanasi) happened to be the place where Sushruta practiced surgery. He has described the extracapsular surgical technique of cataract extraction using a sharply pointed instrument [5]. This is one of the earliest documented surgical approaches to treat cataract [6]. Sushruta's technique of reconstruction surgery was in use among Vaidyas even during the colonial rule. A case report of a Vaidya using forehead flap to reconstruct the nose was published as a letter to the editor in the Gentleman's Magazine as early as in 1794 [7]. This in fact made western world aware of this technique. Table 1 gives an illustrative list of ophthalmological conditions documented in Sushruta Samhita where different types of surgical interventions are recommended.

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2. Recent history of surgical practice by Ayurveda practitioners

While practice of Ayurveda medicine continued uninterruptedly, the surgical practice came to a standstill due to multitude of reasons including the advent of Buddhist philosophy and social prejudice against surgery [8]. Though there were earlier proposals to include surgery in Ayurveda education [9], the actual revival of Ayurvedic surgery (Shalya Tantra / Shalakya Tantra) started around two decades before the CCIM came into existence in 1971. The contribution of Banaras Hindu University (BHU) in this process of revival is very significant. In BHU, both western medicine and Ayurveda are taught under the common roof of Institute of Medical Sciences. The leaders who played a major role in giving shape to this kind of a unique institute were the products of earlier Ayurveda College that awarded AMS (Ayurvedacharya with Medicine and Surgery) degrees in BHU. Two such pioneers, Prof. KN Udupa and Prof. PJ Deshpande, though were basically from the stream of Ayurveda, got their training in surgery from the University of Michigan, USA and Vienna Academy of Medicine, Austria respectively [10,11]. These universities welcomed them and trained them well in surgery - is something that depicts the values these institutions stood for. These teachers later even trained the students of initial batches of MBBS in BHU. This environment made many Ayurveda Vaidyas learn modern surgery under the direct supervision and training of these professors and also from the professors of western surgery in 1950's and 60's. Many of these trained Vaidyas got dispersed across all corners of India, and started teaching surgery in various Ayurveda colleges. Thus, most of the established surgeons from Ayurveda have their connections with BHU either directly or indirectly. Another stream of Ayurveda Vaidyas that acquired western surgical skills was from Maharashtra, primarily from Pune.

Hence, there are many skilled surgeons in Ayurveda sector - is a fact that needs to be acknowledged. However, based on their exposure, the skills these surgeons possess might be limited to certain types of procedures, ano-rectal procedures being the most common ones. Similarly, there are skilled ophthalmologists and ENT specialists in Ayurveda sector who can surgically operate many cases. Hence, the limitation imposed by the extent of clinical exposure they received during their training is one of the major factors that determines what they actually practice.

It is to be noted that the picture of successful Shalya/ Shalakya practitioners is not restricted to this description. In south Indian states like Kerala and Karnataka, most of the Shalakya specialists do not perform any surgeries at all. They do not perform even comparatively simpler procedures such as septoplasty or cataract surgeries. Instead, they target only such clinical conditions that do not require surgical intervention. Even many Shalya practitioners practice *Kaya Chikitsa* (clinical medicine) instead of surgery because the cases they opt to treat are of different category. Many a times they restrict themselves to chronic wounds, wart excision, drainage of abscesses and other similar minor surgical procedures.

3. Should all Ayurveda Shalya Tantra (Surgery)/Shalakya Tantra (eye and ENT) specialists be stopped from what they are doing?

The development of *Kshara Sutra* (seton therapy) to treat ano-rectal fistula took place in BHU after taking cues from Sushruta Samhita. Good observational studies with large number of cases were reported in 1960's and 70's in highly reputed journals by Ayurveda teachers from BHU [12,13]. Today, this therapy is well recognised by modern-day surgeons and is included in standard western textbooks of surgery. This achievement was possible only because these Vaidyas had access to patients. Application of *Kshara*, another procedure that is gaining popularity in the management of haemorrhoids is also developed by Shalya Tantra specialists who have access to patients [14]. Application of leeches (hirudotherapy), another popular intervention being practised by many surgeons also can be traced back to Sushruta Samhita [15]. Hence, there cannot be a bigger mistake than banning Vaidyas from seeing patients and asking them to stop what they have been doing.

4. Where is the actual problem?

A majority of students see Ayurveda programs as a backdoor entry to practice western medicine/surgery. They join these colleges because they were unable to get into MBBS programs. Many a times students join BAMS after spending 3–4 years in preparations for pre-medical entrance tests and failing thereafter.

Loopholes in the system have allowed the establishment of sub-standard colleges in large numbers. Out of 400 and odd colleges that are functional at present, about 250 were established during

Table 1
Illustrative list of ophthalmological conditions where different surgical interventions have been recommended in Sushruta Samhita.

Sanskrit names	Reference	Represented conditions in terms of modern ophthalmology
Kaphaja Linganasha	Sushruta, Uttaratantra Chapter 17	Cataract
Pakshmakopa	Sushruta, Uttaratantra Chapter 16	Trichiasis, Distichiasis Entropion
Arma	Sushruta, Uttaratantra Chapter 15	Pterygia, Pseudopterygia
Lagana	Sushruta, Uttaratantra Chapter 14	Chalazion
Utsangini	Sushruta, Uttaratantra Chapter 13	Hordeolum
Kumbhika	Sushruta, Uttaratantra Chapter 13	Cyst of Zeis, Cyst of Moll Sebaceous cyst, Eccrine hydrocystoma
Vartmaarsha	Sushruta, Uttaratantra Chapter 13	Squamous cell papilloma, Seborrhoic keratosis, Actinic keratosis, Basal cell carcinoma, Squamous Cell Carcinoma, Keratoacanthoma
Pothaki	Sushruta, Uttaratantra Chapter 13	Trachoma
Puyalasa / Vidradhi	Sushruta, Uttaratantra Chapter 13	Dacryocystitis, Preseptal Cellulitis, Orbital Cellulitis
Nayanabhighata	Sushruta, Uttaratantra Chapter 19	Conjunctival Foreign Bodies, Corneal Foreign Bodies, Orbital fracture repair, Traumatic eyelid repair

last 20 years. In many colleges there are neither patients nor teachers! Such institutions thrive because of fake patient records and ghost teachers that are shown to the inspecting CCIM committees. In most of the Ayurveda colleges, students do not get exposed to a variety of cases [16]. Mostly the cases they get to see belong to chronic diseases like joint disorders, skin diseases, stroke etc. Hence, the training these students receive in any branch are not uniform and vary widely from institution to institution [17].

5. License? To whom? How?

The current notification of the CCIM is a document that makes it essential for Shalya/Shalakya post graduates to be trained well in the surgical procedures given in the list. In principle, this is not a license to practice surgery but is a directive that makes the surgical training essential. However, once included in the curriculum, the students would definitely practice these skills after acquiring their degrees.

The questions that immediately arise are:

a) Whether this notification makes all Shalya-Shalakya degree holders eligible to practice surgery?
b) Is this applicable retrospectively or prospectively?

Since this matter is about the modification in curriculum, it should naturally be applicable prospectively and not retrospectively. A blanket approval to all Shalya-Shalakya postgraduate degree holders to practice multitude of surgeries without actually assessing their knowledge and skills in the domain is definitely problematic. Exercising discretion in such important matters of public relevance is absolutely essential to avoid chaos. The present notification includes dental surgeries and many eye and ENT surgeries under Shalakya Tantra curriculum, which is a totally unrealistic expectation.

To give justice to many skilful surgeons who are already working in the field, the approval to practice surgery may be given only after evaluating their clinical work record. Developing an objective strategy to evaluate work record should not be difficult. Similarly, prospective approval to practice surgery can be given on a case-to-case basis only after evaluating a teaching institute and the candidate thoroughly. This is a difficult task to accomplish given the rampant lobbying and other loopholes that exist in the system. Hence, a few institutions maybe identified where Ayurveda colleges co-exist with medical colleges and where surgeons trained in allopathy can train Ayurveda students concurrently. This would ensure the availability of patients to train these students and also would ensure the required rigor. A new nomenclature of these degrees can be considered to bring in more clarity.

6. The way forward

The surgical content in the curricular framework of surgical specialities makes for about 50% of entire Sushruta Samhita, and hence, the postgraduate degree holders in these specialities can't be stopped from being trained in surgical skills and from practicing those skills. It is unrealistic to stop them from using advanced knowledge and resources, latest instruments and surgical techniques. However, in order to retain holistic character of Ayurveda, it should also be ensured that other areas such as Agni Karma, Kshara Karma, leech therapy etc. are not ignored in the curriculum updates. A well-researched, fact-based and implementable curricular framework, improved system of continuous medical education including hands-on training after masters' degree, and better research in less explored areas - must be the logical next steps.

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The corresponding author of this manuscript is a member of the editorial board of the Journal of Ayurveda and Integrative Medicine. However, he was neither involved in the editorial and peer review process nor in the editorial decision of this paper.

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