

## Surgical Training in Ayurveda: Reality Check, Challenges And Solutions

Aakash Kembhavi<sup>1\*</sup>, Anita Kadagad Kembhavi<sup>2</sup>

<sup>1</sup>MD, PGDMLS, MS (Counseling & Psychotherapy), Director @ Astanga Wellness Pvt Ltd, Hubli, Karnataka, India

<sup>2</sup>MD, DYS, D.Nat-Yoga(Ayu), D.Ac, MA (Counseling in Child Mental Health, MSc Yoga, Director @ Astanga Wellness Pvt Ltd, Hubli, Karnataka, India

\*Corresponding Author

Email Id: drkembhavikpl@gmail.com; drkembhavi@astangawellness.org

### ABSTRACT

This is written in response to the recent Gazette notification by the Government of India related to the various surgeries that MS Shalya and Shalakyas doctors in Ayurveda can perform. Acharya Sushruta has been accepted as the “Father of Surgery” and “Father of Plastic Surgery” by the entire world including the modern surgeons. There are many firsts that have been accepted to have been the contributions of this great Indian surgeon who had a flourishing surgical practice even before other civilizations began learning the basics. A glorious past does not automatically qualify for present laurels. A reality check is very much needed. The authors mean to draw your attention to the existing system of education and training in surgery in Ayurveda and point out the drawbacks and lacunae prevailing. The authors feel that system of Ayurveda needs surgery to eradicate the ills plaguing the system. The authors present their case limited only to the field of Shalya (Surgery) as it is their domain of expertise and experience, through the following points - Historical aspect of Shalya Tantra & Development of Syllabus in Ayurveda, Present Shalya BAMS & MS Shalya Curriculum Analysis, Present Scenario / Reality, Questions and Proposed solutions. Introspection and realignment are necessary to restore the glory of surgery in Ayurveda and the authors wish is to protect, preserve, nurture, nourish and promote the sanctity of this ancient treasure of knowledge.

**Key Words:** Ayurveda, Shalya, Shalya Tantra, Surgery, Syllabus, Ayush, CCIM

### INTRODUCTION

Many of you would begin to read this with a prejudiced mind and with an intention to question the title itself! Well, if the title has evoked this reaction from you, the reader, then half our job is done. Having said that, we want you to read this paper with an open mind and take time to understand the real intentions of the authors before drawing any conclusions.

This is written in response to the recent Gazette notification by the Government of India [1]. Related to the various surgeries that MS Shalya and Shalakyas doctors in Ayurveda can perform. This statement has evoked the expected reactions from

respective sections of medicine – the Ayurveda fraternity and the Indian Medical Association (IMA). The former is elated and has hailed [2] this announcement and sees it as a triumph for the system, whereas the IMA has responded strongly by raising a few questions against it and has published a press release as well [3].

The authors feel that amidst the furore and the arm-chair wrestling going on, the most pertinent question remains unanswered. That is – What is the basis of this? And what is the reality? In fact the most relevant question that needs to be asked is

this – What is the reality of surgical training in Ayurveda? And by this the authors mean to draw your attention to the existing system of education and training in surgery in Ayurveda and point out the drawbacks and lacunae prevailing. The authors feel that system of Ayurveda needs surgery to eradicate the ills plaguing the system. Well, if you want to understand the concerns and why this question needs to be asked, then please read on.

The authors would like to present their case limited only to the field of Shalya (Surgery) as it is their domain of expertise and experience, through the following points:

- 1) Historical aspect of Shalya Tantra & Development of Syllabus in Ayurveda
- 2) Present Shalya BAMS & MS Shalya Curriculum Analysis
- 3) Present Scenario / Reality
- 4) Our Questions
- 5) Proposed solutions
- 6) Conclusion

One of the authors of this paper has an MD Shalya Tantra in Ayurveda. Yes, you read it right. At the time that this author completed the post graduate studies in Shalya Tantra in Ayurveda, the degree awarded was MD Shalya Tantra. At this reputed institute where this degree was offered, other than ano-rectal surgeries, no other surgical training was imparted, not because of the lack of infrastructure or qualified teachers, but because of administrative logjam and a mindset that “Surgery equals to Violence” and Ayurveda does not believe in violence! Can you believe that?

So, one may ask – what qualifications the author has to write about the issue?

Well, a lot of dedicated, devoted and disciplined hard work was put in to learn the practice and principles of surgery from

various sources and presently, the author has found his niche in ano-rectal cases, management of wounds and ulcers of all types including diabetic foot and urinary tract diseases and these are managed by traditional principles of Ayurveda. The author is updated in his knowledge of surgery so that he can teach and guide his students properly, but he does not claim that he imparts full surgical training to his students. Being a teacher for the past 20 years and having interacted with thousands of students and having observed the system of Ayurveda from very close quarters certainly qualifies him to write about the subject.

The questions raised in this paper should not be construed as being against Ayurveda, but as an honest and a sincere attempt to address the problems in order to find suitable solutions to preserve, protect, nurture, nourish and propagate the most ancient system of health and well-being, Ayurveda.

1. **Historical Aspect of Shalya Tantra (Surgical Branch of Ayurveda):** That Ayurveda is eternal and predates any known written source of medical literature has been globally accepted. Acharya Sushruta has been accepted as the “Father of Surgery” and “Father of Plastic Surgery” by the entire world including the modern surgeons. There are many firsts that have been accepted to have been the contributions of this great Indian surgeon who had a flourishing surgical practice even before other civilizations began learning the basics. As Dr M S Valiathan puts it – He (Sushruta) pioneered surgery at a time when it hardly existed elsewhere in the world. What he left behind was an incredible legacy in surgical philosophy, technique, management and instrumentation. No wonder his

successors attributed divine origins to Susruta, the surgeon-extraordinary [4]. The sacred texts of Ayurveda have extensive descriptions of the achievements of our great ancestors. Many may laugh at them, but it remains an undisputed fact that we had a glorious heritage. Nearly 1200 diseases and more than 500 surgical procedures have been described in the Sushruta Samhita originally written in Sanskrit. According to Gaur, B L – “knowledge of Sanskrit Language is necessary to interpret and infer the contextual meanings in Ayurvedic studies and research” [5]. The origin of Shalya Tantra is very interesting too. It is described that surgery developed because of the war between the Gods and the Demons (REF) and this can be correlated with the development of surgical principles surrounding with the world wars and how they were refined around that time because up until then, we had not seen human wounds and suffering on that scale and everything that was known about wound and sepsis management was either useless or inadequate. So, injury has been the common starting point of the development of both surgical sciences.

Since then, the world of modern medicine and surgery started a new chapter and went on to develop through rigorous research, audit and refinement to the stage that we are all aware of. There has been a global effort in the development of surgical principles and techniques that is benefitting human kind greatly.

Many “impossible to even think of” procedures have been developed and all this has been possible because of the collaborative work between doctors, surgeons, scientists, chemists

and experts from many other allied fields of science.

Because of the suppression by the British rule, Ayurveda, unfortunately, remained stagnant and was neither revived nor promoted with the same zeal or enthusiasm even by people within the system. The system is still stuck in what we would like to call it as the “**PAST GLORY SYNDROME**”. Much time was spent on coming to terms with what route of development should be adopted through the formation of a number of committees [6] which submitted recommendations and many have remained as such till now. The education pattern was deliberated for quite some time and it oscillated between Pure Ayurveda to Integrated Ayurveda and thus was developed the curriculum for teaching Ayurveda which has undergone many revisions till now. We are now at a point where the curriculum that is taught at the BAMS and MS levels is a heavy mix of Ayurveda and modern surgery. This brings us to our next point.

- 2. Present Shalya BAMS & MS Shalya Curriculum:** A cursory glance at the contents of the syllabus for the Bachelor of Ayurvedic Medicine & Surgery (BAMS) and MS in Shalya Tantra (Ayurvedic Surgery) will reveal that it is filled with almost everything from the modern medical text books of surgery [7]. Procedures ranging from a simple incision and drainage to head and spine injuries, thoracic trauma to oncology and laproscopic procedures *etc* can be found! You can download the syllabus by following the reference quoted above. So far so good. Right? Let’s look at the next point now.
- 3. Present Scenario/Reality:** There are more than 300 Ayurveda colleges in

India and more than 60 of those offer the Post Graduate courses (MD/MS) in Ayurveda [8]. In order to get into MS a student who has passed BAMS and completed one year of mandatory internship has to appear for an all India PG entrance exam and select the MS stream to pursue higher studies. Now, the entrance exam is common for all 21 streams of post graduate disciplines that are offered in Ayurveda.

We need to understand what sort of training and skill development a BAMS student goes through during the course of the study of Ayurveda. At the BAMS level, Shalya Tantra or Surgery is taught in the fourth year. The syllabus makes it clear that the student should only be exposed to the clinical cases and has to just observe a few surgical procedures listed. Even though a vast majority of Ayurveda colleges have a fully functional operation theatre infrastructure because that is mandated by the regulations to provide the necessary permissions and the affiliations by the apex bodies [9], they are not well equipped in terms of trained surgery teachers who can impart training in these procedures. Only a few handful colleges have qualified surgeons – again, these teachers are MS Shalya Tantra, as that is the minimum qualification required to be appointed as a teacher – who can impart quality training and surgical exposure. Because of the lack of quality teachers with adequate practical training and exposure, at the BAMS level, what ends up happening is that the theory part of the curriculum is taught with very poor clinical exposure. To compensate for this, a few colleges provide clinical postings in government run district hospitals or private hospitals locally and there is

very little follow-up on the skills that the students actually pick up there.

Come the time for examinations, it is mandatory that in clinical subjects like surgery, actual cases are provided to the students to test their abilities. But, because of the poor inputs in the number of patients and the lack of surgical procedures being performed in the college, the students are given a chit with a name of a disease and are asked to develop a hypothetical case and plan treatment and write about the surgical procedure that they would do in that case! And to add insult to injury, the chits are divided in two categories – a) Long Case and b) Short Case. A long case requires all the details to be written and a short case, just a few details. In the viva-voce exams, very little gets asked with regards to the practical surgical procedures. To quote Prof Dr. S.N Gupta – “The examination system has become a farce. The universities, institutions and the teachers/examiners are not serious in evaluating the competence of the student in the practical application of the subject” [10]. This is true for both the undergraduate as well as the post graduate level. So, practically, the exams end up being a formality and the standards of examination and valuation have degraded over the decades.

Once the student passes the BAMS, then comes the mandatory one year internship period. Now, this is the most crucial period of their career as their future clinical practice depends on this training period. It is a fact that a vast majority of students start working in modern medical hospitals to gain clinical exposure and become confident in the practical knowledge of clinical practice because they have not been

taught this at their college. Can we blame them? As Aakash Sethi and Gayatri Laha, third MBBS students, say – “In its 11<sup>th</sup> Five Year Plan, the Planning Commission said AYUSH students spend less than is necessary learning AYUSH modalities. As a result, these students lack confidence, knowledge and skills in using AYUSH specific ideas and therapies and tend to prefer their modern counterparts even if they haven’t been fully trained on that front” [11]. Again, to make matters worse, the regulatory authorities have imposed mandatory duties in their respective college hospitals, where they end up doing clerical job like filling case sheets and creating dummy case sheets to fulfil the criteria of minimum number of patients as mandated by the authorities! This is a matter for another research paper altogether!

So, what do you think happens to the student? Put yourself in their shoes and think. They end up frustrated but cannot raise their voices nor fight against the system otherwise their completion certificates will not be issued which means that they cannot register themselves as doctors in the respective state boards. It is an irrefutable fact that a majority of students who pass out of a college never ever come back to their colleges because there is nothing for them there.

A few interested students end up going from post to pillar to try and study for the entrance examinations to get into post graduate studies. Like we said earlier, there is just one entrance exam to get into 21 disciplines in Ayurveda. So, getting a MS Shalya Tantra seat is more a matter of luck rather than choice and even if they do get into the MS Shalya Tantra stream, there is no

evidence that they are genuinely interested in that subject. The really interested ones are only a handful of them. If that is the case, then why do students opt for MS Shalya Tantra? The answer is simple: It gives them permission to conduct surgeries. You may ask – What is wrong with this? Well, if a particular college does not have qualified teachers to teach surgery at the BAMS level, then how will they teach MS Shalya PG scholars? The next question logically should be - How are these PG Scholars trained then?

This is where the problem multiplies. It is a fact that many colleges offering MS Shalya Tantra course do not make it mandatory that the scholars should study and train full time in their respective colleges! Why? It is because they neither have the required infrastructure nor the personnel to train their students. In which case, there would be an understanding between the students and the college that they will be allowed to work and/or train under a surgeon or hospital of their choice and that they come to the college now and then to report and then for their examinations. Your guess about what happens to the post graduate mandatory research work that is expected from them is as good as ours! Now, you realise why Ayurveda research is sub-standard! Examination at the post graduate level too becomes just a formality and there is no accountability at all. This becomes more complicated at the PhD level of studies in Shalya Tantra in Ayurveda.

PG and PhD levels indicate domains of specialisation and super specialisation and one would expect that the quality of research to be of world class level and that the research output addresses

the needs of the society and contributes to the development of the science and helps design a standard protocol of treatment for various diseases. None of this happens. Please remember, we are saying that this is what happens in a majority of colleges and with a majority of students. There are a few institutes in India where highly qualified teachers are available and the infrastructure is at par with any modern hospital and the students are trained exceptionally well. Surgeries in Ayurveda colleges are conducted as per the modern methods with the services of a qualified anaesthetist. Modern day antibiotics and protocol of pre-operative, operative and post-operative management is followed as per the standards followed by any modern medical surgeon. There are only a few people who add Ayurveda medicines to their prescription. So, the question that the modern medical surgeons are asking about what protocols we are following in Ayurveda colleges is valid.

#### **What is the outcome then?**

- a) A vast majority of Ayurveda MS scholars are not trained in their respective colleges
- b) They are trained by modern surgeons in either government run or private hospitals
- c) There are very few colleges which actually train MS Ayurveda scholars in the surgical principles of Ayurveda

There are myriad problems plaguing the education system in Ayurveda and all issues cannot be discussed here as they are outside of the scope of the present paper. However, we hope that with our presentation so far, it gives one a clear idea of the problems that Ayurveda education has. For more

information you can read a paper published by the authors, titled – “Reforms in Ayurveda Education – Challenges and Roadblocks” [12].

#### **4. Our Questions**

At a time when questions and counter questions are being asked in the media about the validity of the gazette notification, we feel that it is time to ask a few pertinent questions. They are:

- 1) The curriculum of Surgery in BAMS and MS Shalya is so extensive and all encompassing that it is practically impossible to teach and train students in them. This is then used to claim that because everything in modern surgery is there in the syllabus, we should be allowed to practice it as well. No wonder, the modern medical system is seeing this as a back door entry into the field of surgery!
- 2) If a vast majority of MS Ayurveda scholars are not trained in their respective colleges then do they have the legal provision to practice surgery?
- 3) If the quality of teachers and the examination standards are poor, then should these teachers be allowed to teach and conduct exams?
- 4) Once a student has passed out of the college, there is no body to check up on the regular upgradation of skills through a credit system or otherwise. Once qualified, it is a free license to practice whatever they want. There are plenty of Ayurveda post graduates who have completed their studies in one of the 21 disciplines other than MS Ayurveda, but they are practising surgeons today. This happens because there are no career

opportunities for them in their field of specialisation. They enrol into post graduate studies just to get a MD or MS certificate which will then allow them to do whatever they want. They, end up attending some training workshops and start practising surgery. Is this even legal?

**Proposed Solutions: The authors propose a “5R Approach” –**

- 1) Restructuring the syllabus
- 2) Re-assessment of delivery of teaching and training
- 3) Refinement in the quality of training
- 4) Realignment of priorities
- 5) Reach Out

1. **Restructuring of the Syllabus:** Prof Kishor Patwardhan puts it succinctly – “The problem with the present Ayurveda curriculum is that it spells out nothing clearly as to what is expected of an Ayurveda physician after graduating from a college” [13]. A serious effort has to be initiated to restructure the syllabus of Shalya Tantra in Ayurveda to make it more practice oriented. There are a lot of unwanted and impractical points which have to be removed. This can be easily achieved if the qualified teachers are taken on board to draft a new syllabus. The quality of the reference text books is very poor and most of them are translated versions of modern medical text books. There are only a few texts which undergo editions to address the present day clinical challenges.

2. **Re-assessment of Delivery of Teaching and Training:** If Shalya Tantra in Ayurveda has to be accepted locally and internationally, then, there is an urgent need to reassess the way teachers are recruited. Regular upgradation of skills through credits or certification workshops should be

made mandatory and a database of an individuals’ area of specialisation should be created and updated regularly. Surgical audits should be made mandatory in every college and there should be a third party assessment as well. To quote Dr Narendra Bhatt – “ There is a need to prevent unscrupulous or inappropriate use of these treatment procedures in the hands of unqualified or poorly qualified people to prevent false accusations being levelled at the system” [14].

3. **Refinement in the Quality of Training:**

This is a no brainer. It goes without saying that practice makes a man perfect and surgery is a skill as well as art and therefore it needs to be refined every day. Evidence based and objective training based on integrative approaches should be imparted to our scholars so that they realise the value of our system, but that poses a huge challenge as Dr Narendra Bhatt says – “The whole effort of integration should be ‘Shastra and Science’ rather than ‘Shastra v/s Science’ [15], which is what is happening today in the present context. Further, in the words of Prof. Dr. G.S. Lavekar – “It is true that in the time span that has passed, some important literature of Ayurveda has been lost. Hence many important aspects and subjects are missing such as anaesthesia, organ transplant surgery etc. And today only references are available. Research is the developmental aspect of all sciences; it continues at all times. Ayurveda is no exception to this; the principles remain the same though some new principles may be added. The methodology changes in the light of related contemporary sciences” [16].

4. **Realignment of Priorities:** It is high time that the system of Ayurveda has to have a serious introspection about

setting its priorities right in order to become a global healthcare provider. It needs a strong vision and mission that can be implemented with transparency and accountability. Ayurveda as a system is averse to criticism and does not like people asking questions. This goes against the very nature of Ayurveda because, our ancient teachers encouraged questions to be asked and if one reads the scriptures, the scientific enquiry method is followed everywhere. It is a very unfortunate scenario that BAMS and MD/MS Ayurveda doctors organise protest rallies and processions to demand that they be allowed to prescribe allopathic medicines! This erodes the trust of the society in the great science of Ayurveda.

5. **Reach Out:** Ayurveda cannot afford to be on the defensive. There is a huge world waiting out there to receive the benefits of Ayurveda and the science cannot grow if it is restricted in its approach. We need to reach out to the modern medical system and work out a solution in the best interests of the people of our country. We should not be competing with them but rather standing shoulder to shoulder with them. We have to accept our limitations and reach out to the other side to seek help. Confrontational attitude will not yield results nor will harping on past glory of Ayurveda do any good to the present and future scenario to the science and practice of Ayurveda. There are many areas where Ayurveda interventions provide excellent benefits which need to be highlighted. To quote a few examples – varicose vein and its complications, arterial ulcers, diabetic foot are areas where Ayurveda works wonders. Does it not become the responsibility of Ayurveda and its stake holders to propagate the benefits to the scientific

world through properly designed studies so that the modern medical doctors start accepting our results? We need to be out there with evidence and open to discussion, debate and criticism if we have to progress. We should also be reaching out to the local and the international community to create awareness about the benefits of traditional and scientific Ayurveda. The information should be scrutinised and curated by experts in the field. It is a fact that there is plenty of misinformation about Ayurveda and Ayurvedic herbs and formulations and people are taken for a ride and exploited. Dilution of the principles of Ayurveda is the biggest threat to the survival of Ayurveda. As Prof. Dr Manoranjan Sahu puts it clearly – “Under the table leadership of Prof K N Udupa during the 1970s, both the facilities of Ayurveda and Modern Medicine flourished and the surgeons of Ayurveda got full freedom to practice surgery and serve the community” and “For the development of surgical practice in Ayurveda, an unbound support of modern techniques and facilities is required along with continuous exploration and researches so that the lost glory of Ayurveda Surgery can be restored and it can serve humankind in better ways” [17].

## CONCLUSION

Prof Dr Ajay Kumar Sharma, Former Ayurveda Chair, Rangsit University, Thailand and Former Director, National Institute of Ayurveda, Jaipur is of the opinion that – For standardising, improving and globalizing Ayurveda, the status of imparting Ayurvedic education both in India and globally must change.

In addition, the existing system of education needs to undergo reforms, a complete review, with deliberations and



gross modifications at grass root level through serious exchange of thoughts with academicians, educationists and policy makers...” [18].

This is not a time to confront and agitate but a time to reach out and strengthen the science for the benefit of humanity. It is also a time to start accepting our own limitations, introspect and address the short comings and build a robust academic and clinical skill development system so that the future generations of Ayurveda doctors do not have to deal with the legality of these issues.

As Prof Sanjeev Rastogi and Prof Ram Harsh Singh opine – “..Mainstreaming Ayurveda looks to be an approach to bridge the gap between what is expected and what is practised in it. A multi-level and multi-stake approach involving education, research and practice of Ayurveda would be the ultimate way to bring about this mainstreaming to make any real impact [19].

As Prachi Singh, a public health professional, writes – “The contest between AYUSH and Allopathy Shouldn’t Forget Public Health” [20]. The true value of a medical system is measured based on the impact that it has on the health of the public. It is high time that the system of Ayurveda should start listening to the questions posed by everyone and instead of knee-jerk reactions what is needed is a constructive consultation with all the stake holders and develops a road map to make Ayurveda locally and globally acceptable and accessible.

It is the honest belief, opinion and desire of the authors that Ayurveda has to be revived, nurtured, nourished, protected and promoted in the right sense to become a true global healthcare provider. Ayurveda has to learn to adapt and adapt to the new challenges and rise above to address them

to resolve them with logical explanation and analysis in a way that society accepts it without prejudice.

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