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Review Article

Emanating the specialty clinical practices in Ayurveda: Preliminary observations from an arthritis clinic and its implications

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ABSTRACT

Despite their historical praise, specialty studies and practices are not generally seen in current Ayurvedic education and practice. Current Ayurvedic education by and large is devoid of training programs focusing upon specialty based health care delivery. This makes many disappointed who look at Ayurveda for a focused and specialized health care. The consequences of this gap in demand and supply are alarmingly obvious. With its unfocused health care approach, the Ayurvedic health care remains generic for large section of its delivery. There are no referral settings in Ayurveda to get a higher level of care better than the one offered at a primary health care setting. This apparent lack of expertise care in Ayurveda shifts it as an alternative health care used only on the instances of failure of other trusted options. Specialty clinical practices in Ayurveda seem highly important in order to build the trust and to enhance its quality of health care delivery. Our preliminary observations from a deemed arthritis clinic at an Ayurveda teaching hospital, visited by a diverse joint disease population carves a path in this direction and proposes the possibilities of using it as a template for the qualitative improvements in Ayurvedic health care delivery in the country in various clinical areas.

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1. Introduction

Ayurvedic clinical practice in India is largely a generalist family practice handling diverse clinical conditions. There are also unsubstantiated belief about safety, effectiveness, slow action, diagnostic and cure potential of Ayurveda [1]. These issues have not been addressed well and efforts of building the image of Ayurveda as of a dependable, reliable and reproducible health care provider have not been very promising.

Absence of a clear knowledge of their potential has brought Ayurveda physicians isolated from the mainstream health care. Pleas of recommendation of Ayurvedic therapies are built around the weakness of modern health care as their high cost, adversities and failures in finding the convincing cures without showing the dependable benefits obtainable through recommended Ayurvedic care in similar clinical conditions. Although there are many examples of specialized clinical practices of Ayurveda in the country, these isolated examples could not be replicated for their exclusion from the conventional teaching and training of Ayurveda across the

country. In this scenario of Ayurveda practice in the country, this seems important to demonstrate the need of specialty education and practice of Ayurveda through the practical benefits of improved health care delivery. This article elaborates this argument through preliminary observations from a deemed Ayurveda arthritis specialty clinic functioning at a teaching hospital which is approved to be escalated as a fully function arthritic clinic by Govt. of Uttar Pradesh. The initiative seems to be first of its kind in the country in the Govt. sector.

2. Specialty practices in Ayurveda: references from the past

On the basis of textual references, specialty practice in Ayurveda may find its origin since antiquity. Ayurveda, from its very origin was conceived to be *ashtanga* (eight branched) composed of *kaya chikitsa* (internal medicine), *balaroga* (pediatrics and maternity), *graha* (treatment of supernatural afflictions and mental disorders), *urdhvanga* (treatment of head and neck), *shalya* (surgery), *danshtra* (treatment of venoms and poisons), *jara* (geriatrics) and *vrisha* (treatment of impotency and virility) [2].

Besides its human use, Ayurveda also had veterinary practices for domesticated animals [3]. *Vrikshayurveda*, was a specialty

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dealing with plant diseases. Ayurveda subsequently evolved in methods of clinical diagnosis, pharmaceuticals, and natural sources of drugs and has produced elaborate texts like *Madhava Nidana*, *Sharangadhara Samhita* and *Bhavaprakasha Samhita* giving explicit details in these knowledge areas. Texts like *Charak Samhita*, *Sushruta Samhita* and *Kashyap Samhita* became the iconic bases for practice of Ayurvedic medicine, surgery and pediatrics. The distinction between surgical and medical approaches of treatment for different clinical conditions was a remarkable advancement of ancient Ayurvedic clinical practice. A surgically treatable condition once identified, was clearly told to be referred to the surgical school. Moving one step ahead, Sushruta developed surgical sub-specialties. *Arbudagya* (one who possess special knowledge in tumor science (*Sushruta Nidana* 12/21) was one such coinage of Sushruta [4]. There had been many more instances of such domain expertise during the phase of evolution of ayurveda. Ayurvedic alchemy (*Rasashatra*) was possibly the last inclusion in the evolution of ayurveda which has introduced herbo-metallic preparations as the mean of rapid recovery contrasting the slow action of herb alone formulations.

After this initial landmark progress towards specialization in early phase, much of the similar tune and appeal could not be achieved in later periods of growth in Ayurveda.

3. Current scenario: specialty education and practice in Ayurveda

Ayurveda education in India is currently regulated by CCIM as a statutory body. The undergraduate education is distributed through fourteen broad subject areas including Ayurvedic basic science, anatomy, physiology, pharmacology and pharmaceuticals and the clinical areas including medicine, surgery, pediatrics, gynecology and obstetrics and *panchakarma*. Post graduate training program of Ayurveda is available in 22 clinical and non clinical areas. Ayurveda PG education objective envisioned by CCIM is 'to provide orientation of specialties and super-specialties of Ayurveda and to produce experts and specialists who can be competent and efficient teachers, physicians, surgeons, obstetricians and gynecologists (*stree roga* and *prasuti tantragra*), pharmaceutical experts, researchers and profound scholars in various fields of specialization of Ayurveda' [5]. In view of number of Ayurveda postgraduates produced every year, there should have been enough clinical specialists in Ayurveda visible through the quality of care delivered at Ayurveda teaching institutions. Unfortunately the objective of PG education in Ayurveda fail to meet due to suboptimal clinical exposure and inefficient training opportunities [6,7]. Although, CCIM objective of PG education in Ayurveda also talks about super-specialty orientation, in the absence of a clear teaching and training plan and in the absence of real clinical material, it remains an unmet dream.

As a definite advancement in the recent past, modality and technique based specialized care like *kshara sutra* and *panchakarma* has begun in Ayurveda. This gained popularity for their ability to produce quick, tangible and reproducible results. Identifying *Panchakarma* as a separate branch of study in ayurveda in the recent past was one such move which has infused much thrust to the study, research and patient care in this area. This is yet to see if this distinction has added any value to the patient care in general and has helped building more evidences in particular. At places, small technique based sub-specialties like *agni karma* and *rakta-mokshana* have also been developed though are still evolving.

Ayurveda clinical specialists are much easier to find in private sector. The conditions where Ayurveda has numerous self styled specialists are many and composes mainly of cancer, diabetes, skin diseases (psoriasis, vitiligo and leukoderma), arthritis, sexual dysfunctions, infertility, obesity and cosmetic care. Finding large and

unsubstantiated claims against both, the prognostic spirit of Ayurveda and the drugs and magical remedies (objectionable advertisements) Act 1954 is not uncommon in these areas [8]. In the absence of predictable end points of interventions and clear outcome reporting, such self appraised practices remain questionable. Although pockets of genuine clinical excellence in specialized areas are sporadically available in Ayurveda across the country, and are being tried to get mainstreamed and disseminated through schemes like '*Guru Shishya Parampara*' run by Rashtriya Ayurveda Vidyapeeth on the behest of Ministry of AYUSH, the scale of such activities is too small to make any reasonable impact upon the specialized health care delivery in such areas [9]. Sadly, yet there are no mechanisms in Ayurveda to utilize such individual clinical excellence through introducing it in the formal Ayurvedic education and training system.

Central Council for Research in Ayurvedic Sciences (CCRAS), an apex organization in India, responsible for setting the translational benchmarks for practice in Ayurveda made rapid advances towards specialty research by establishing clinical research centers across the country. These research centers are working in the areas like cancer, veterinary Ayurveda, *vrikshayurveda*, heart diseases, eye diseases, mental diseases, mother and child care etc. Any real impact of these specialty centers on the research, education and practice of Ayurveda in the country however is yet to be seen [10]. In public health care delivery system of India, roles of Ayurveda clinical specialists have not yet been identified. In central services like CGHS and ESI and in state services, only general Ayurvedic health care is delivered and not the specialized care. Ayurvedic clinical specializations are not yet utilized in public health care delivery and neither has ever been thought of.

4. Envisaging specialty clinics in Ayurveda: need based strategies are required

Looking at various clinical subspecialties in Ayurveda and matching them with the patients input in Ayurvedic clinics [11], the primary focus area for Ayurvedic clinical practice seems to be the one where people have a trust in its efficacy. Finest examples of such clinical areas are joint diseases, neuromuscular deficits, hepato-biliary diseases, gastrointestinal diseases, ano-rectal conditions, skin disease and sexual disorders. Non communicable diseases like diabetes, hypertension and obesity may also be included in list for increasing demand of Ayurveda in such areas. In the absence of a clear plan to utilize this large patient pool pouring at Ayurvedic clinics, such opportunities are wasted and fail to turn into evidences.

To recognize the share of Ayurveda in easing out the disease burden and to utilize the huge patient input available at Ayurvedic outdoors, recognition of the clinical entities in dual diagnostic terms, both Ayurvedic as well as modern is required. Making a dual diagnosis in Ayurvedic clinics may come as a great help in quantifying the real contribution of Ayurveda in clinical conditions recognizable by the health care policy makers [12,13]. Subsequently by observing the benefits on the basis of deliverables, the impact of Ayurvedic interventions in such clinical entities can be measured and quantified. This will give Ayurveda a credit for its services which remained unrecognized for long. From a health policy perspective, this will help a more thoughtful, rational and proportionate resource allocation to Ayurveda in ratio of its actual contribution to the effective health care.

Building up specialty clinics in Ayurveda seem to be a most pragmatic way to cherish these long term goals of defining clearly, what a system is really contributing to the total health care delivery in the country.

5. Ayurvedic specialty clinic: exemplifying through Ayurvedic Arthritis practice

Ayurvedic clinics in general are found to have visited by large number of patients suffering with joint diseases. Over 50–60% arthritis patients seek Ayurvedic care during the course of their illness [14]. While recounting the strengths of Ayurveda in its thrust clinical areas, joint diseases emerge as a natural choice enjoying the trust of the patients as well as of physicians [15]. Current arthritis practice in Ayurveda however largely lacks an evidence based decision making approach related to diagnosis and management on the basis of *rogi-roga pariksha* (examining the disease and the patient). Despite large anecdotal claims and inferences of superiority or equivalence of Ayurvedic whole system or its components in arthritis management [16–18], how much Ayurveda independently or in integration with modern health care, contributes to the reduction of joint disease burden in the country is unclear. From Ayurvedic perspectives of arthritis management, many questions are yet to be answered. These include the choice of drugs for various disease conditions, treatment personalization in terms of choice, dose and duration of use, primary and secondary end points of the therapy, safety of interventions in standalone or integrative mode. Safety of Ayurvedic drugs used for joint disease further requires to be evaluated in the presence of coexisting illnesses and also in physiologically distinguished populations of elderly, pediatric, pregnancy and lactation.

Ayurvedic researches in arthritis so far have largely been confined to the testing of efficacy of its formulations in established joint pathologies. Most of such researches are short term tests for the efficacy of drugs against set clinical or biochemical parameters done on the pilot basis or as comparative trials with placebo or standard modern care as control. There is a paucity of RCTs of Ayurvedic medicines for most arthritic conditions and the existing RCTs fail to show convincingly that such treatments are effective therapeutic options for arthritic conditions [19,20]. The comprehensive practices prevailing in Ayurvedic clinics pertaining to the joint care are however rarely attempted to be evaluated for their comparative uniqueness. A whole system research to evaluate the Ayurvedic comprehensive management for joint disease, utilizing its own disease and its management logics [16] looks promising from this perspective. How Ayurveda may help to check the progression of the disease, and can help people do well with their joint pathologies with improved quality of life and retention of their productivity, are other questions awaiting a research based reply.

Such questions can never be answered through conventional clinical researches unless the focus is upon the practice of Ayurveda in specific segments like that of joint diseases and to collect the data from the real practice. Establishing the ayurveda specialty clinic for joint diseases seem to be a feasible way to move in the direction of a dependable ayurvedic health care where knowledge is generated at field through constant observations and is brought upward for its expanded applications.

6. Initiatives to begin ayurveda arthritis specialty clinic: preliminary observations

Understanding the urgent need of evaluating Ayurvedic clinical practices in joint care in order to place them strategically in national joint care delivery programs, and to identify their contribution in ameliorating the joint disease burden in the country, a self inspired initiative was taken by Department of Kaya Chikitsa at State Ayurvedic College and Hospital, Lucknow. It begun with the idea of collecting and organizing the data pertaining to the joint disease patients visiting Kaya Chikitsa outpatient clinic in the hospital to see the large picture of joint disease input and responses

in Ayurveda clinics. The observation was done at one Kaya Chikitsa outpatient clinic deemed as arthritis clinic on the basis of treating physician's expertise.

The observation and the data collection was done on the behest of approval of a proposal of opening an independent 'Ayurveda arthritis specialty clinic' by the state government, as first arthritis specialty clinic in the country opened in public sector. The data for the analysis was taken from the arthritis register maintained by the clinic and comprising of demographic, clinical and response details of the patients during their initial and subsequent visits.

All patients presenting with any joint related symptom attending the outpatient clinic were recorded in the arthritis register for their inputs. Those having other concomitant illnesses besides their joint complaints have not been excluded. All patients were diagnosed initially for their possible Ayurvedic diagnosis utilizing Ayurvedic principles of disease identification. A parallel modern diagnosis was also made either by taking a note of the diagnosis made by the previously treating modern physician or by making a diagnosis on the basis of symptoms and investigations. All record keeping in the arthritis clinic was done by the post graduate students posted at the clinic. All recorded patients, on the day of their first visit, were given the hospital record number and on subsequent visits, were followed up against the same number. Besides recognizing the demographic and clinical profile of the patients visiting the clinic, the other purpose of the record keeping was to note the number of follow ups by individual cases in order to ascertain the treatment compliance during the study period. The record keeping however was not intended to evaluate the efficacy of the Ayurvedic treatment provided in specific joint conditions. The record keeping for the patients suffering with joint disease and visiting the deemed arthritis clinic at State Ayurvedic College and Hospital, Lucknow begun from 8.9.2018 and is still continuing. Data recorded during initial 7 months (till 8.4.2019) was utilized for the purpose of analysis.

6.1. Demographic profile of the patients with joint diseases visiting Ayurveda clinic

Total 782 patient visits have been recorded in the clinic in initial 7 months of record keeping. This comprised of 448 new patient visits and 334 follow up visits. Average total, new and follow up monthly patient visits were 112, 64 and 48 respectively. Among new registered cases, 195 (43.52%) were male and 253 (56.47%) were female. Age of the patients visiting the clinic ranged between 16 and 82 years with an average of 49.48 years.

6.2. Average frequency of visits and total duration of treatment

Highest number of total visits to the clinic made by a single patient was 14 during the whole observation period where as the minimum was 1. There were 1.75 average visits per patient to the clinic made during the study period. Minimum duration of treatment was reported to be 1 week (lost to the follow up after 1 week) and the maximum was 29 weeks. Average treatment duration was reported to be 3.39 weeks.

6.3. Disease pattern

The patients visiting the clinic were clinically diagnosed for nearest Ayurvedic clinical conditions at the time of registration. There were also the conditions matching to more than one diagnostic category. These patients were eventually diagnosed for more than one clinical entity. Highest diagnostic proportion in the clinic was of *sandhivata* (33.92%) followed by *katishula* (31.91%) and *amavata* (22.32%). *Asthi dhatu kshaya* and *grevastambha* were the

Table 1

Type of Joint conditions from Ayurvedic perspective observed in the clinic.

No	Type of joint condition	Number of patients	%
1	Aamvata	100	22.32
2	Ansa shula	12	2.67
3	Sandhivata	152	33.92
4	Asthi dhatu kshaya	42	9.3
5	Kati shula	143	31.91
6	Prishtha Shula	10	2.23
7	Avasad	4	0.89
8	VataRakta	6	1.78
9	Vatakantaka	6	1.33
10	Grivastambha	25	5.58
11	Gridhrasi	7	1.56
12	Urustambha	2	0.44
13	Kshatajasandhishula	13	1.56
14	Avabahuk	2	0.44

clinical entities represented by 9.3% and 5.58% patients respectively (Table 1)

All the registered patients were parallel diagnosed for their modern diagnosis either by noting the previously made diagnosis by a modern physician or with the help of available investigations and clinical presentation. From modern diagnostic perspectives, highest proportion of the patients was for osteoarthritis knee (33.70%) followed by low back pain (21.20%) and rheumatoid arthritis (12.72%). 8.03% patients were reported to have degenerative disc disease and associated back pain symptoms confirmed by MRI examination. 6.25% patients were found suffering with osteoporosis. Spondyloarthropathy, isolated cervical spondylosis and joint pain associated with injury formed the subsequent groups represented by 3.57%, 2.67% and 2.45% patients respectively (see Table 2).

6.4. Cumulated response pattern

Although the data keeping was not primarily intended to observe the efficacy of Ayurvedic treatments in individual disease sets, the patients in general were enquired about their perception about the treatment in terms of relief in their initial symptoms. Average relief obtained by the patients visiting the clinic was about

Table 2

Type of Joint related conditions from modern perspectives observed in the clinic.

No	Type of joint condition	Number of patients	%
1	Osteoarthritis knee	151	33.70
2	Low Back Pain	95	21.20
3	Degenerative Disc Disease	36	8.03
4	Rheumatoid Arthritis	57	12.72
5	Upper Back Pain	5	1.11
6	Pot's Spine	2	0.44
7	Chronic Fatigue Syndrome	2	0.44
8	Gouty Arthritis	5	1.11
9	Planter Fasciitis	2	0.44
10	Spondyloarthropathy	16	3.57
11	Cervical Spondylosis	12	2.67
12	Fracture	2	0.44
13	Ankylosing Spondylitis	1	0.22
14	Osteoporosis	28	6.25
15	Non rheumatic pain	2	0.44
16	Sciatica	3	0.66
17	Post Traumatic joint pain	11	2.45
18	Psoriatic Arthritis	3	0.66
19	Avascular Necrosis	3	0.66
20	Pigmented Villonodular Synovitis	1	0.22
21	Spinal Canal Stenosis	3	0.66
22	Fibromyalgia	5	1.11
23	Shoulder Pain	8	1.78

59.32% with a minimum 5% (patients having minimum or no response from the treatment in their initial joint complaints) and maximum 100% (patients having complete relief in their presenting symptoms and are willing to know if they can stop the medicine) relief. The relief was reported by the patients on verbal rating scale upon asking them to quantify the relief obtained in response to the treatment on a scale of '0 to 100' where 0 represented minimal or no relief in the initial symptoms and 100 represented almost absence of the symptoms for which they have initially arrived [21]. The relief obtained was sought through a random enquiry from those patients who have completed the treatment for a minimum period of 3 weeks.

7. Discussion

Current medical practice and education in India is found to have about 45 departments having their independent clinics and sub clinics in various specialty and subspecialty areas [22]. In medicine alone, there are 11 specialty clinics having their independent outpatient clinics. Department like rheumatology, earlier the part of medicine, are enjoying its independent status now. This is obvious to note that in wake of enormous knowledge emerging in healthcare, developing specialties have become a necessity to cope with the new knowledge.

Ayurveda, despite recognizing specialization in its study and practice since antiquity, could not accommodate it in the contemporary context. Specialty education and practice trend of modern medicine gives a clear notion that establishing such clinics and departments are essential to impart quality services steered through the focused growth of a subject. Creating specialized branches also in turn help accumulating the data related to the disease and its epidemiology which helps in planning and allocating the resources as per the actual needs. Finally, accumulating the assertive data showing a system responsiveness in a particular illness may eventually help determining the contribution of such systems in total health care. This may serve a long purpose of identifying all which is beneficial in a particular condition and eventually framing the best evidence based recommendations to handle such conditions as per the current knowledge.

Joint diseases in this regard seem to be an apt beginning for the development of specialties in Ayurveda. The large number of joint disease patients seen at Ayurveda outpatient clinics is an objective evidence of strength of Ayurveda in this segment. The disease variety observed in this preliminary study has significance by noticing that in Ayurvedic clinic, majority of joint patients are those who do not get desirable responses from modern medicine. Osteoarthritis knee and degenerative disc disease therefore form a large bulk of patients visiting Ayurvedic arthritis clinics. Non responsiveness, drug associated adversities and high cost of the therapy are other reasons turning the people with joint diseases to look at Ayurveda. The general response pattern as is reported by the patients who have received Ayurvedic therapy for a minimal period of 3 weeks is also a matter of great significance. Although, this response is not focused on a particular disease or patient type and hence is not appropriate to be called as the intervention outcome, it do reflects the overall perception of patients suffering with joint diseases and receiving the recommended Ayurvedic therapy for some time. A disease and the patient wise identification of Ayurvedic treatment protocols, observing the obtained response and identifying the ways to maximize them are the next steps to be followed [23]. Defining the clinical diagnostic criteria [24], finding the primary and secondary management plans as per the disease intensity and severity [25], setting the treatment goals and determining the role of additive therapies for a comprehensive management of joint disease through Ayurveda [26,27] could have been few immediate

targets to be achieved in near future by establishing fully functional Ayurveda arthritis clinics utilizing the classical wisdom of Ayurveda and its clinical translation. There can be inherent problems associated with such novel initiatives. It is often feared that opening such specialty clinics may eventually dilute the holistic wisdom of Ayurveda. Moreover, making a dual diagnosis may prompt confusion and temptation of using a reductionist approach of management rather than using the holistic plan. Taking the example of *amavata* and rheumatoid arthritis as its nearest modern correlate, we can reiterate that an *amavata* patient arriving at Ayurveda arthritis specialty clinic would essentially be receiving the tailored management on the basis of Ayurvedic diagnostic and management principles and not for rheumatoid arthritis or any other mimicking condition. This should be cleared that a modern parallel diagnosis is needed only to recognize the Ayurveda contribution on ameliorating the disease burden in terms of diagnosis recognizable through ICD and not for the treatment [12]. There are also the concerns about sustainability of specialty care model in Ayurveda and its impacts upon Ayurveda practice and education. Feasibility and sustainability of running Ayurveda specialty clinics is already shown through many individual examples although such initiatives have been limited in the public sector. Finest specialty building examples in the education system of Ayurveda were given by dividing the broader subjects into their smaller yet more focused components. Dividing Kaya Chikitsa into *SwasthaVritta*, *Agada tantra*, *Nidana* and *Pancha karma*; *Shareer* into *Kriya* and *Rachana Shareera*; *Stree-Prasuti* and *Kaumar- Bhritiya* into their separate entities and *Shalya – Shalakya* as independent departments were such examples. Now after over a decade of such divisions, we see this as a bold step to improve the quality of education and delivery of health care in Ayurveda within these respective disciplines. This is pragmatic to think of moving further in this direction by defining the clinical subspecialties in Ayurveda focusing upon the systems and their diseases to emanate a better patient centric care. Developing a culture of cross referrals could be one most immediate benefit of building specialties in Ayurveda and this is found actually happening while running this arthritis specialty program.

Government and policy makers may play a crucial role designing a ground plan for how such specialties may be built and run to their optimal utilization. There can be specialties handling to the specific conditions prevalent in a geographical area. There can also be general health keeping and preventive health care clinics. One most fascinating could have been a community based panchakarma clinic where routine panchakarma facilities are proposed to be placed and maintained at community centers for their shared use.

8. Conclusion

After many decades of establishing Ayurveda as a duly recognized health care system in India, much is still left to be achieved in terms of keeping it in pace with the progress of modern medicine. NSSO survey 2014 has shown a declining trend of the Indian population considering Ayurveda as a primary source of help in their illnesses [28]. Efforts are made through public and private modes to make Ayurveda popular, but much remains to be done on the grounds of its safety, dependability and standard of care. Current patient load seen in Ayurveda clinics is largely a load dissatisfied with modern care and hence is seeking alternative care. If these people can be given the desired benefits, eventually they can turn out to be the strong promoters of Ayurveda. Ayurveda has lost its ground as a dependable first care provider due to its unreliable and not dependable services. Absence of evidence based specialized care leads to further disappointment. Building up specialist practice in Ayurveda can be of utmost importance on many counts. It may help collecting the realistic clinic based epidemiological data about

the particular disease and may help sorting out all possible remedies which are meaningful in such conditions. Gradual, consistent and long term observations of various treatment combinations in variety of patients may eventually give an understanding about reliability, dependability and reproducibility of care provided in specific clinical conditions. This knowledge supplemented with focused researches will pave the way for specialized health care in Ayurveda at par with contemporary medical practice. This is obvious to presume that after these efforts, we may possibly have a reliable and dependable Ayurvedic health care, to be trusted as a first care in many clinical conditions. Arthritis specialty clinic in Ayurveda may be seen as an early step in the long journey aiming to make Ayurveda more objective and dependable on the matters of clinical care.

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