

Need for Very Close Collaboration between the Medical and Dental Professions

Dr. Ashoka Jahnavi Prasad

“The patient is quite willing to describe and discuss with the doctor all his other troubles and complaints, to which, as he says, he is a ‘martyr’ - his indigestion, headaches, liver troubles, his rheumatism, his gout, and his ‘neuritis’. But the subject of his teeth is his own affair - one between himself and his dentist. And the doctor regards it as such. ‘It is a matter of teeth and dentistry,’ with which he cannot deal. ... It is not ‘a matter of teeth and dentistry’. It is an all-important matter of sepsis and antisepsis that concerns every branch of the medical profession, and concerns very closely the public health of the community. It is not a simple matter of ‘neglect of the teeth’ by the patient, as is so commonly stated, but one of neglect of a great infection by the profession ...

No one has probably had more reason than I have had to admire the sheer ingenuity and mechanical skill constantly displayed by the dental surgeon. And no one has had more reason to appreciate the ghastly tragedies of oral sepsis which his misplaced ingenuity so often carries in its train. Gold fillings, gold caps, gold bridges, gold crowns, fixed dentures, built in, on, and around diseased teeth, form a veritable mausoleum of gold over a mass of sepsis to which there is no parallel in the whole realm of medicine or surgery. The whole constitutes a perfect gold trap of sepsis of which the patient is proud and which no persuasion will induce him to part with. For has it not cost him much money, and has he not been proud to have his black roots elegantly covered with beaten gold, although no ingenuity in the world can incorporate the gold edge of the cap or crown with the underlying surfaces of the root beneath the edges of the gums. ... Such are the fruits of this baneful so-called ‘conservative dentistry’. ... Conservative it is, but only in one sense. It conserves the sepsis which it produces by the gold work it places over and around the teeth, by the satisfaction which it gives the patient, by the pride which the dentist responsible for it feels in his ‘high-class American work’, and by the inability or unwillingness to recognise the septic effects which it produces. ... The medical ill effects of this septic surgery are to be seen every day in those who are the victims of this gilded dentistry ... In no class of patients and in no country are these, in my observation, more common than among Americans and in America, the original home of this class of work.”

– William Hunter, 1910



Dr. Ashoka Jahnavi Prasad is identified as the most educationally qualified person in the world by The Polymath. He has a dynamic resume with a PhD in history of medicine from Cambridge, LLM from Harvard among other notable qualifications. Dr. Prasad has also worked as a consultant to the World Health Organization (WHO) and helped prepare two of their reports.

I have, right from my days as a medical student, wondered why it was considered necessary for dentistry to have an independent existence from the other branches of medicine. It has always appeared bizarre and incongruous. After all dental care is an integral component of health and dental conditions do have a bearing on the other parts of the body affecting nearly every system. It was reassuring to learn that one of the recognized all-time greats battled with the same dilemma.

I did pose a few interrogatories as to how this separation came about and its desirability but never quite received a satisfactory answer. Some of my colleagues were of the view that treatment of dental conditions involved only very short term medical attention and no hospitalization hence its existence as a separate profession was justified. This somehow did not seem a credible explanation

as there are other medical specialties where hospitalization is hardly ever required. Our medical school did have a bed in the medical ward assigned for dermatological patients but in all my time there, I can recall it being occupied only once with a pemphigus patient receiving care. Yet it was nobody's case -and rightly so-that dermatology should be separated from rest of medicine.

Ironically, the most popular dental surgeon in the metropolis was Dr. Aslam who took up dentistry only after his comprehensive medical training when he went to Paris. But he remains the only such physician I knew of until decades later I was apprised of Dr. Pleus from Lustmuhle in Switzerland.

As to the desirability of amalgamation of dentistry with the mainstream medicine, the general view was that since this status has been accepted, it would not be in public interest to alter the situation as it existed -and still does. Most surprising was the fact that even in the West with its inquisitive academic tradition, such an incongruous separation does not invite any debate. One of my Swiss colleagues did try to raise this issue but did not find any takers. The World Medical Association and the World Dental Association have remained silent on this anomaly as has been the World Health Organization.

Clearly this confers disadvantage to the dental profession. Despite a very well established specialty which is every bit as essential as the other specialties, no dental surgeon has ever made it to the top of the medical echelon such as the chief of the WHO-or even aspired for it. But the existence of dentistry as a separate profession has conferred a major disadvantage to the mainstream medicine as well. We are given hardly any instruction on the intricacies of dental problems and the most rudimentary skills needed. At least that was the state of affairs when I was a medical student about 45 years ago and my understanding is that things have not changed in this regard.

The legitimate question of course is that do we need to acquire preliminary skills in dentistry in our basic medical training as we do of other specialties. I believe we do. Not very often we do come across patients with dental problems who do turn up at the clinics in remote centres not just in India but in many other countries I have worked in where dental surgeons are not available; we simply do not have the skills to handle the contingency which to me is most unfortunate. There is an acute shortage of dentists in remote areas - perhaps even more so than general practitioners and specialists, and until this is effectively addressed, I think

a short period of dental apprenticeship maybe during the internship stage would be desirable. Conversely, there is also a case for the dentistry recruits to familiarize themselves with some of the systematic management of the certain conditions which might be expected to emerge in the course of dental management. This fact was of course recognized when it was decided to extend full prescribing rights to dental surgeons - and rightly so!

In effect I am stating that even if there is no consensus on amalgamation, there is a strong case for the two professions to maintain a strong link with each other which presently does not exist. Comprehensive health-care is woefully incomplete unless we incorporate dental care and hygiene.

This somewhat artificial separation of the two professions had a very interesting corollary. When I was working towards a doctorate in history of medicine, in a seminar on 'The Most Primitive Surgical Procedures Known to Medicine' at Cambridge in which I participated, I ended up upsetting a few experts when I questioned their assertion that the earliest known surgical procedures performed on the human beings were circumcision, gall-bladder, and trepanning of the skull followed by Caesarian section. My contention was that the earliest known surgical procedures in this regard were dental operations -evidence exists that dental surgery was actively practiced was back in 3000 BC.

Evidence of dental decay has been found in teeth from skulls that are 25,000 years old and archaeologists have evidence of the first dental fillings in teeth from people who lived around 8000 BC in the Indus Valley Civilization. The first written reference to dental decay is found in a Sumerian text from 5000 BC. Ancient Egyptian papers dating as back as far as 3700 BC have references to diseases of the teeth, and describe substances to be mixed and applied to the mouth to relieve pain. The first references to dentists are in ancient Egyptian texts from 2700 BC, and refer to a doctor who specializes in treating teeth. Greek writings from 1300 BC by Aesculapius, a Greek physician, discuss extracting (or pulling) diseased teeth. Moving forward into 5000 BC, the Sumerians blamed tooth worms as the cause of any dental issues, with the worms boring little holes in your teeth and hiding out inside. (Reportedly some ancient doctors even mistook nerves as tooth worms and tried to yank them out. Ouch!) The idea that a worm travelled through your mouth and was the cause of dental pain lasted until it was proven false in the 1700s. In ancient Greece, Hippocrates and Aristotle wrote about treating decayed teeth as well as having

teeth extracted to keep mouth pain away. The concept of having a tooth extracted from the mouth through using forceps was often used to treat many diseases into the middle ages.

Although books and reviews on the history of dentistry usually start with a description of the evolution of medicine and dentistry during the existence of Sumeria, Babylon and Ancient Egypt, and the practice of dentistry among Hebrews, Phoenicians and Chinese, Greeks and Romans, those then practicing the three ill's ("drill, fill and bill") business (essentially some kind of micro-carpentry) were lay people without the academic education required for a modern dentist. And this was still the case during the early part of the 19th century. Teeth are part of the body and, therefore, should have been a matter of medical interest. But while some physicians dedicated considerable time to dental research, the medical profession in general apparently neglected the treatment of dental disorders which they regarded as rather superficial troubles of short duration and very rarely life-threatening.

In medieval Europe, in the 1300s to the 1500s, the elite were aware of the importance of keeping their teeth clean and even had liquids to help whiten their teeth. People's tooth troubles were treated by their own remedies or by barber surgeons. Barber surgeons were jacks-of-all-trades and pulled teeth, performed minor surgery, cut hair and applied leeches. The barber dentists usually pulled teeth to treat decay, but they also knew how to fill cavities and created false teeth out of human teeth and cow bone.

All this is not so very different from the development of mainstream medical profession. The late Roy Porter was justifiably regarded as a pioneer in the history of medicine. He is single-handedly credited with acquainting an entire generation with the history of the development of the healing profession with his classic volume named 'The Greatest Benefit to Mankind'. I believe this book should be read by every medical practitioner (Here I do have to declare myself - Roy was an acquaintance whom I had the pleasure of nominating for the fellowship of the Royal Historical Society). But even this book, comprehensive in every regard only has a passing reference to dentistry.

It was between 1650 and 1800 that the concepts behind what we now think of as dentistry got its start. The man behind the science was 17th century French Physician, Pierre Fauchard. He is called 'The Father of Modern Dentistry', and he was the brains behind many of the procedures still used in today's society. For instance, he was the man behind the thought process

for dental fillings, and he also helped to explain that acids from sugar are a major source of tooth decay.

In 1866 Lucy Hobbs became the first woman dentist when she graduated from Ohio College of Dental Surgery-considerably before Elizabeth Garret Anderson became the first female 'physician'.

Delving into the history of dentistry, I came across some very interesting facts:

- ❑ Dental researchers (they do exist) have been surprised to find that there are grooves in the teeth of prehistoric humans that seem to be similar to those caused by current day dental floss and tooth picks.
- ❑ It is said that the ancient Chinese were the first to use toothbrushes. They made them from pigs' necks or used pieces of wood to create "Chew Sticks".
- ❑ Invisalign braces were first made public in May of 2000, but centuries before, orthodontics were being perfected. Edward H. Angle created a simple classification for crooked teeth in the late 1800s, and that system is still used today. He also started the first school of orthodontics in 1901.
- ❑ Contrary to popular belief, George Washington's teeth were not actually made from wood. Researchers in Baltimore found that his false teeth included gold, ivory, human, and animal teeth. In that time, horse and donkey teeth were often used to supplement the real thing.
- ❑ One of the first known professional dentists was an Egyptian named Hesi-Re who lived around 3000 BC. His tomb included the inscription, "the greatest of those who deal with teeth..."
- ❑ If you had a toothache and when to Roman doctor, Archigenes, around 15 A.D., he'd make an ointment of roasted earthworms, crushed eggs of spiders, and spikenard. Next, he'd drill a hole in the tooth causing you pain and place this ointment inside to relieve it.

Very similar anecdotes shall be found in Roy's book when he elaborates the development of the medical profession. There are clearly some advantages in keeping the two professions separate which a lesser mortal like myself cannot fathom at this moment. But we would do well to remember that their underlying philosophy which includes ethical principles is identical. For that reason alone, it would be in my view to the advantage of both the professions if their interactions were enhanced both formally and informally.

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