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संपादकीय

स्वच्छ हवा – आमचा हक्क !

डॉ. दिलीप पुराणिक

नुकताच म्हणजे दि. ५ जून २०२० रोजी जागतिक पर्यावरण दिवस (World Environment Day, Eco Day) संपन्न झाला. पर्यावरण ही जागतिक समस्या असल्यानेच Word Health Organization च्या वतीने दरवर्षी ५ जून हा दिवस ''पर्यावरण दिन'' म्हणून साजरा केला जातो. अनेकविध कारणांनी पर्यावरणाचा तोल बिघडतो आणि त्या कारणांना जबाबदार बहुतांशी मानवच असतो. प्रदूषण हे फक्त हवेचे नसते तर त्या बरोबर पाणी, ध्वनी अशा प्रकारचे आढळून येते. जागतिक पातळीवरील तापमानातील वाढ ह्यास पर्यावरणाची मानवनिर्मित हानी हेच कारण प्रामुख्याने कारणीभूत आहे.

जागतिक स्तरावर होणारी तापमानातील वाढ ही अनेक कारणांनी होत आहे. त्यामध्ये प्रामुख्याने हवेचे प्रदूषण आणि ते होण्याची कारणे ह्यांचा सहभाग जास्त आहे. प्रचंड प्रमाणावर होणारी वृक्षतोड, पर्यायाने जंगल हानी झाल्याने हवाही गरम होते आणि त्याचा पर्जन्यावर परीणाम होतो. त्यातच भर पडते वृक्षतोड झाल्यानंतर त्या ठिकाणी उभ्या राहात असलेल्या ''काँक्रिट जंगलाची.'' सिमेंटच्या होत असलेल्या धुराळ्यामुळे हवा अधिकच प्रदूषित होवून त्याचे सूक्ष्म धूलीकण श्वासाद्वारे मनुष्याच्या शरीरात जातात.

इंग्लंड, अमेरिकेसारख्या पाश्चात्य देशातील अर्थव्यवस्था प्रामुख्याने ऑटोमोबाईल इंडस्ट्रीवर आधारीत आहे. असंख्य वाहनातून बाहेर पडणारा धूर हवेचे प्रचंड प्रमाणावर प्रदूषण करतोच परंतु त्या बरोबर तापमान वाढीसही हातभार लावतो. ऑटोमोबाईल इंडस्ट्रिजबरोबरच इतरही अनेक औद्योगिक कारखाने आपापल्या परीने हवेत धूर ओकत असतात आणि हवा कमालीची प्रदूषितही करत असतात. केमिकल इंडस्ट्रिजकडून हवेत विषारी धूर बाहेर टाकला जातोच पण त्याशिवाय त्यापेक्षाही विषारी निरुपयोगी द्रव नदी व समुद्रात टाकला जातो. त्यामुळे पाण्याचे प्रदुषण तर होतेच, शिवाय नदी व समुद्रातील जलचर प्राण्यांचे जीवनच धोक्यात येते. त्याचाच परीपाक म्हणजे अनेक वेळा हजारोंनी ''जलचर'' मृतावस्थेत किनाऱ्यावर आलेले आढळून येतात.

शहरांमधून व खेडयांमधूनही तेथील नागरीकांकडून हवा, पाण्याचे, ध्वनीचे प्रचंड प्रमाणात प्रदुषण होत असते. सिगारेटस्, बिडी, चिलीम, हुक्का ह्याद्वारे विषारी वायू हवेत मिसळला जातो. त्याचबरोबर तंबाखू, गुटखा, पान खावून थुंकण्याची आवड सर्वच आबाल वृद्धांमध्ये असल्याने प्रदूषणाची पातळी धोकादायक होते. कानठळ्या बसविणारे DJ, लाऊडस्पिकर्स, स्वयंचलित वाहनांचे गरज नसतांना वाजविण्यात येणारे भोंगे (Horns) ह्यामुळे ध्वनिप्रदूषण उच्च पातळीवर जावून ठेवते.

हवा, ध्वनी, जलप्रदूषणामुळे मानवी शरीराची जबरदस्त हानी होतेच परंतु अनेक विकारही जडतात. हवेच्या श्वासाद्वारे जाणाऱ्या प्रदूषित विषारी कणांमुळे Chr. Obstructive Pulmonary Disease, Tuberculosis, Asthma ह्यासारखे छातीचे व्याधी, ध्वनि प्रदुषणामुळे बाधिर्य (Deafness), Tinnitus, निद्रानाश ह्यासारखे विकार उद्भवतात. दूषित पाण्याच्या सेवनाने पचनाचे व्याधी जडतात.

'Covid 19' ह्या महामारीमुळे सर्वत्र हाःहाकार माजला आहे. देशात बहुतेक राज्यात मोठ्या शहरात 'लॉकडाऊन' लागू करण्यात आला. सर्व व्यवहार, वाहतूक, कारखाने, हॉटेल्स, मॉल्स, करमणूक हॉल्स जवळजवळ तीन महीने बंद झाल्याने हवा, पाणी, ध्वनी ह्यांच्या एरवीच्या प्रदुषण पातळीत कमालीची घट झाल्याचे निष्पन्न झाले आहे. ही प्रदूषण पातळीतील घट आता त्या पेक्षाही कमी पातळीवर आणणे हे तमाम नागरिकांचे प्रथम कर्तव्य आहे. सर्वांनीच तसा निश्चय करणे आवश्यक आहे.

वर्षभर स्वच्छ हवा उपलब्ध होण्यासाठी कांही संघटनांनी मोहीम उघडली आहे. त्यास ''वर्षभर – ६०'' मोहीम असे नाव देण्यात आले आहे. स्वच्छ हवा मिळणे हा जसा हक्क आहे तसा त्यासाठी प्रयत्न करणे हे प्रत्येकाचे कर्तव्यही आहे. सुजाण नागरीकांच्या सहकार्याने ते साध्य होईल व मोहिम यशस्वी होईल असा विश्वास वाटतो.

Perspective/Personal View

Masking India: The only practical solution to kill the COVID-19 pandemic.

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Despite acomplete nationwide lockdown across India for over 70 days, the numbers of people diagnosed with COVID-19 still continues to rise worryingly on a daily basis. We have not yet reached the peak that we so desperately need. The lockdown offered us the most powerful weapon we had in our hand to weaken the speed of the spread of the virus,social distancing. However, there is a limit to which we can afford to have a lockdown. It has already had a heavy toll on our social, behavioural and economic aspects of life, and all of us are eagerly and desperately waiting to go back to our old free lifestyle. What many of us do not realize is that the end of the lockdown is not the end of the COVID-19 pandemic, in fact, it is the beginning of a long-drawn battle that we still need to fight until the virus finally exits. Sadly, that will not happen for at least another 12 - 18 months until mass vaccinationor the herd immunity finally takes over the virus. The last thing we should do is celebrate our freedom after the lockdown is lifted and flood the streets, malls and stations like we did before. History teaches us through the Spanish Influenza pandemic of 1918, which infected one third of the world's population and caused over 50 million deaths, that if we do, we are in for a bigger second wave that will cause more suffering and death. We just cannot afford to be complacent even after the lockdown is lifted.

In the absence of a vaccine and a known effective drug for the treatment of COVID-19, we have only few options at our disposal to tackle this pandemic. Maintaining social distancing after the ban is lifted is going to be a huge practical challenge for a densely populated country like ours, especially in the over-crowded cities and towns. Hand washing with soap and water, which needs to be done many times (at least 10 times) during the day, each lasting for at least 20 seconds, may not be very practical for many people. Sanitization of hands with 70% alcohol will be affordable and practical only for a small minority of the population. We need to find solutions that are not only effective, but also practical and affordable. Can the wearing of a mask by the entire community be a saving solace from this pandemic?

The SARS-Cov-2 is a more contagious virus that replicates predominantly in the upper respiratory tract, unlike the SARC-Cov-1 virus which is less contagious and replicates mainly in the lower respiratory tract [(1)]. The transmission of SARS-Cov-2 therefore occurs by aerosol droplets that are generated, not only during coughing and sneezing, but also during normal talking [(2,3)]. It has been shown that around 80% of those infected with the SARC-Cvo-2 virus remain asymptomatic or very mildly symptomatic and these are the ones who are largely transmitting the virus in the community [(4)]. A large number of aerosols are generated in places where people sing, laugh, shout, greet or pray loudly, thereby increasing the risk of viral transmission. In a choir practice in Seattle, despite maintaining a degree of social distancing during the rehearsal, 45 of the 60 people became infected (5).The main advantage of the mask is that it blocks the spread of the aerosol droplets from the source by retaining the infected droplets.

In a recent story reported from China, an infected man who was not aware that he was COVID positive travelled from point A to point B in a luxury bus without wearing a mask, and

then from point B to point C in a mini bus. But before he sat in the mini bus, he bought himself a mask at the bus station. During the first journey he infected 5 people with the corona virus and during the second journey not a single person was infected (6). Another example is a man who flew from China to Toronto wearing a mask for the entire journey, became symptomatic the next day and tested positive for COVID-19. Interestingly, none of the passengers or crew became infected (7).
Countries where wearing of masks has been a routine practice (e.g. South Korea, Japan) even before the COVID-19 pandemic have shown a much flatter curve than those countries where wearing a mask is not routine at all (e.g. Italy, USA). Countries where masks or cloth face coverings have been introduced as a national policy has invariably shown a downward trend in the viral transmission. Austria and the Czech Republic both introduced social distancing on the same day, but the Czechs also introduced compulsory face masks. The new COVID-19 infections fell more rapidly in Czech Republic than Austria (4).

More recently, mathematicians from the University of Arizona, Florida, Harvard and Sydney got together and developed mathematical models to assess the population level impact of wearing a mask in the community (8,9). Interestingly, they showed that use of a mask by people in the community can significantly reduce the spread of the COVID-19 pandemic. If 70% of the people wore an effective mask for 70% of the time, the COVID pandemic can be almost completely eliminated. Even if half the people wore amask, or for that matter even if 20% of the people wore a mask most of the time, the spread of corona virus infection would still be cut down significantly. The researchers concluded that a simple act like wearing a mask and wearing it properly when you are outside the house can have a profound impact on the COVID pandemic, and recommended that the governments should consider initiating this intervention on an immediate basis.

Which masks are appropriate to be used in the community?

The N95 mask has become the most popular mask during the COVID-19 pandemic. It is a triple layered respirator mask that was primarily developed to protect people from noxious particles and gases at work places. Because it also had the ability to filter off very tiny particles such as the size of bacteria and viruses, it began to be used during infectious outbreaks as well, especially by healthcare providers to protect themselves from the infected patients. Because of their strong filtering capacity, which also hinges on a tight wear, they are not very comfortable masks to wear and breathe. People with underlying lung diseases and heart problems will find it particularly hard to breathe through. The N95 masks with the valve, designed to make breathing out easier should certainly not be worn in the community because of the risk of transmitting the viruses, although in real life we see a large number of people wearing a valved N95 mask. Because of the severe shortages of the genuine N95 masks, fake masks have flooded the market, completely unaware by most people, and they likely offer compromised protection. N95 masks can be worn only once and need to be discarded after single use during the day. Most people sadly continue to use the same mask for days. N95 masks are not recommended for use in the community. They should be only restricted for use by healthcare providers in the hospital setting.

The surgical mask is another mask that not only reduces the risk of transmitting infection to others, but also protects the wearer from catching the infection. It is a three-layered mask that offers protection over a period of 4 to 6 hours after which it needs to be discarded. It cannot be reused again. It needs to be disposed properly, in order to minimize the risk of further spread through physical contact. A single-layered or a two-layered surgical mask or the often-used dust masks offer very little protection and should not be used.

On 30th March 2020, the Office of the

Principle Scientific Advisor to the Prime Minister of India released an advisory that everybody in the community should wear a mask and that people can make their own mask at home using cotton fabric (10). This advisory was released with the objective of offering a simple, cheap and reusable mask that could offer at least some degree of protection and prevention for the spread of the COVID-19 virus in the community. There was no specific fabric that was recommended because at that time there was no knowledge about which type of fabric offersgood quality protection and prevention, although multiple layers were recommended. A research group from the School of Molecular Engineering at the University of Chicago, USA compared different fabrics for their efficacy in filtering off particles of the size of the virus, and reported that a mask made of cotton quilt or cotton plus chiffon or cotton plus flannel offered protection that was equivalent to an N95 or surgical mask, or even better. A cloth mask made up of fabric that had 80 threads per inch was no good at filtering virus sized particles, even after using two layers, while a cloth fibre that had 600 threads per inch performed as good as a surgical mask(11). The fact that a cotton quilt mask or a hybrid cotton chiffon or cotton flannel mask are as good as the N95 mask offers an entire new opportunity for the community at large to prevent transmission and protect themselves from the corona virus. We now seem to have a solution that is simple, readily available, can be made at home, cheap and reusable. Masks, however, need to be worn properly with a tight fit and for all the time when you are out, otherwise they do not offer any protection.

Concluding remarks : A simple thing like wearing a mask can have a profound effect on the COVID-19 pandemic in our country. If every Indian wear a cloth mask whenever he or she goes out and ensures good care and standards of hygiene, we will be able to get rid of this pandemic much sooner than later. We need to start respecting the mask, change our behaviour and start getting used to this new face accessory on an immediate basis. The mask can be a major saving grace for our country's COVID-19 pandemic.

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Improving Psychological Wellbeing In The COVID - 19 Times

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Introduction - When faced with uncertainty or threatening situations the human mind has 3 types of programmed, primitive responses in its repertoire, they are the fight, flight and freeze responses. If our mind perceives that we are capable of fighting off the threat or have a similar memory of fighting off, it would respond with the fight response, if the threat is stronger than us, our mind would respond by inducing the escape (flight) or freeze (pretend to be dead) response. These responses are a part of our psychological evolution and because they have worked in the past, our mind still utilizes them.

In the current COVID-19 situation, we are faced with an unprecedented and uncertain situation, so naturally we are responding on the community level using the same 3 methods, we are fighting (vaccine development, finding cures), we are escaping (social distancing, using masks etc) and we are freezing (lockdowns). On a personal level these current uncertain times have filled a lot of us with feelings of anxiety, depression, boredom, frustration etc. Since mental well being is a large part of our overall well being, I am going to suggest a few methods by which we can develop and sustain psychological well being in these challenging times. The AYUSH ministry guidelines also include daily meditation as a component of boosting immunity[1], since psychological wellbeing also plays an important role in our immunity[2]. Looking at the current symptoms of COVID 19 like endothelial damage, higher mortality in people with metabolic disorders, multi organ failure, ARDS it is a possibility that oxidative stress might be one of the effects of SARS-COV2 and people already having high levels of oxidative stress maybe having a more serious outcome of the disease. Psychological wellbeing does play a role in helping to reduce oxidative stress[3].

The human mind : the modern human mind evolved roughly around 200.000 years ago when the homo-sapiens evolved. Like any organism our continued survival depended on us having access to food, shelter and the continuation of species (sex). So the human mind evolved as a tool to allow us to meet these needs and survive. We are not the strongest species on the planet, so we needed a tool that could give us edge over other creatures and our mind was this tool. The human minds number one job is to keep us alive. Some of the methods that our mind uses to keep us alive are being judgemental, making us aware of threats (real and perceived), constantly compare ourselves to our peers, problem solve etc (all these process have an evolutionary history and memory). Relational frame theory (RFT)4 explains how the human mind learns by association, human language itself is a product of relating and it was evolved as another survival tool.

We human species have become the dominant species on the planet because of our ability to imagine future problems and find solutions. As far as we know we are the only primates who have been gifted with the powers of imagination, memory, and discretion. No other species can imagine futures in such vivid manner as humans can, this is both a boon and a curse. Even though this imagination and problem solving ability has made it possible for us to inhabit almost every corner of the planet (and soon maybe other planets too) it has also led to a huge amount of psychological suffering. Acceptance and Commitment therapy (ACT), a type of evidence based behavioural psychotherapy postulates that psychological rigidity and experiential avoidance are at the root of most of our psychological sufferings like Anxiety disorders, depression, and substance abuse. In the current challenging

times and also in the near future a lot many people are struggling and are going to struggle with these issues. The burden of COVID 19 on psychological well being is also going to be big. So learning to cultivate psychological flexibility can be an important asset.

Psychological rigidity generally develops as a result of 6 processes.

1) Experiential avoidance (EA).
2) Strong attachment to a conceptualized past and a fearful future.
3) Lack of clarity of personal values in life.
4) Inaction or Avoidance of effective action.
5) Self as a concept (attachment to labels).
6) Fusion with thoughts.

Although each of these processes itself can be a subject for individual articles, I am going to try to describe them in brief.

1) Experiential avoidance : our mind tends to categorize certain thoughts, feelings and emotions as positive and others as negative. For example happiness is considered a positive emotion whereas sadness is considered as a negative emotion. Obviously whenever we come into contact with something which has been categorized by our mind as negative, it will try its best to get rid of it at all costs. This often leads to us avoiding certain experiences which in the long term could have led to growth. EA can also lead to certain emotions taking precedence over others, which in turn can be very detrimental to our wellbeing. Often substance abuse, excessive shopping, eating is done to sustain the feeling of happiness and to avoid feelings of boredom, sadness or fear.

2) Conceptualised past and fearful future : our mind because of its powers of memory and imagination can often interfere with us taking effective decisions according to the present situations. Our conceptualised past tends to make us very judgemental and feared futures can lead to hoarding behaviours, selfish actions.

3) Lack of clarity of values : more often than not our lives are guided by our thoughts, feelings and emotions. As we all have experienced these thoughts, feelings and emotions are not static but very dynamic, if we let them guide us it can lead to behave in a way which is contrary to our values (what really matters to us). For example a person might value being there for his children for a long time, but when he has to wear a mask in the public or has symptoms of COVID-19, he might feel ashamed (emotion) and not do what would be needed (thus reducing the chances of him being true to his core values of being there for his children).

4) Inaction or lack of effective action : when we start believing everything our mind tells us it can lead to procrastination, ineffective actions. We all know that exercising regularly, eating healthy food is good for health but then the mind has a thought that "let's start from tomorrow, not today" and as we know this "tomorrow" generally doesn't come.

5) Self as a concept : we all generally describe ourselves using various labels, for example I am a generous person, I am a fearful person, I am a brave person etc. if one becomes too attached to these concepts or labels it can make us remaining stuck in life. Strong identification with certain labels can lead to inflexible behaviour patterns, which can be ineffective. It can lead to over work, burnouts, and diseases becoming chronic (over identification with a disease).

6) Fusion with thoughts : our minds are word generating, problem solving, judgemental tools, the contents of our minds are sometimes useful and sometimes they are not useful. If one starts fusing with and believing every thought it can lead to ineffective behaviours and downward trajectories of lives. The more the mind judges a situation to be threatening the more is our tendency to believe it (this has had evolutionary importance), our lives get stuck as if in a loop and we start looking at the world from the perspective of our thoughts. Sometimes it can be very useful and other times not so much.

Cultivating psychological flexibility: Psychological flexibility is defined as how a person: (1) adapts to fluctuating situational demands, (2) reconfigures mental resources,

(3) shifts perspective, and (4) balances competing desires, needs, and life domains. (Todd B kashdan)[5]. Psychological flexibility has been associated with improved mental and physical well being, improved quality of life. So we can postulate it would also play a role in improving immunity (as improved wellbeing and quality of life will contribute to improved immunity).

If we look at the 6 processes which lead to psychological rigidity we can also see how we can develop psychological flexibility. So the processes that can help us achieve psychological flexibility are

1) Acceptance of thoughts, feelings and emotions. 2) Mindfulness or present moment awareness. 3) Clarification of values.

4) Committed action. 5) Self as a context.

6) Taking distance from the contents of our mind.

1) Acceptance of thoughts, feelings, and emotions : Often times when our mind is generating fearful, anxious, sad thoughts we try to change them, suppress them, distract from them, avoid them. This strategy of avoidance, replacement, getting rid of something (in this case certain thoughts) works very well in the outside world, for example if one has a chair in the room that one does not like, one can easily replace it, hid it, cover it up and the problem is solved; But when we try to apply the same successful strategy to our internal struggles it often doesn't work and in fact can make the problems more dominant. In psychology there is a phenomenon called the Wegner rebound effect 6 the harder we try to get rid of, change unwanted thoughts feeling emotions the stronger they become. Instead of trying to control the thoughts feelings emotions, if we learn to practice acceptance and give up the control agenda, we have time and energy available for doing important things in life. Acceptance doesn't mean meek submission or giving up, it actually means to allow whatever (thoughts feelings emotions) are there to be there without resistance.

2) Present moment awareness or mindfulness : Studies have shown the possible benefits of mindfulness (paying open and curious attention to the present moment) on physical and psychological well being7 8. Cultivating the habit of bringing back the mind to the present moment is an important skill to learn and can help us to focus on the task at hand. Mindfulness can be cultivated by paying attention to our daily lives, there are so many things we do in our life as if on auto pilot, selecting one daily activity and doing it with awareness helps us to learn the art of being mindful.

3) Clarification of Values : Our values are something that we hold very near and dear to us. Values are our core desires and they are ongoing actions. Values are not goals; for example learning can be a value whereas completing graduation can be one of the goals. Many times we get disheartened because we cannot reach a particular goal but if we can focus more on the value, we will continue to strive. In the current scenarios many business will need to change their business models and this is going to be difficult as previously aimed goals and targets will not be met or achieved, but if the management can identify their core values and let them guide the changes, the transition can be smoother. And the same goes for individuals.

4) Committed action : Once we have achieved some clarification of our values (there are various methods of doing this), we need to take small incremental steps in the direction of our values. For example if taking care of oneself is a value, we can start making small committed actions towards healthier living. Doing meditation or yoga is beneficial for both psychological and physical well being, but anyone who has tried to do formal meditation knows it is not easy to sit still for a prolonged duration of time (the mind constantly chatters and judges), instead if we do small incremental amounts of time of meditation or yoga, we would be much better off than doing a lot on one day and then nothing. As the proverb goes "Journey of a thousand miles starts but with a single step".

5) Self in context : We humans are

multifaceted beings, so any label that we identify ourselves with might be true in certain contexts but generally never in all contexts. A person who describes himself as anxious or angry or smart maybe has these emotions or thoughts for a larger part of the day but that does not mean that it is the only thought, feeling or emotion they have thorough out the day. If we understand that we all have different roles to play in various contexts and if we learn to play these roles flexibly without letting one role spill over in other contexts or dominate all contexts, it helps to develop psychological flexibility. There is a part of us, which is different from all the labels we identify with; it is like the sky that allows different weather to be present. Wisdom traditions have given it various names like the Observer, The no mind, The Soul etc. It is a part of us that is an impartial observer of our lives, it is the constant in the change, and learning to take the observer perspective is looking at oneself as contextual entities instead of fixed entities.

6) Taking distance from the mind : also described as observing the content of the mind dispassionately. This is one of the most important skills that we can learn to develop psychological flexibility. In our wakefulness (and also in REM stages of sleep) we humans are floating in a sea of thoughts, more often than not, we are not even aware of our thoughts. Only when we are struggling with certain difficult emotions like anxiety, depression, frustration, anger do we start noticing our thoughts. Often time's thoughts emotions and actions are thought to be interconnected. But we have to realise that we can have a thought and not act on it. Thoughts or emotions can give rise to a strong inclination towards action but ultimately what we do with our hands and feet is absolutely in our control. We often procrastinate or put off doing things because we don't feel confident and then wait for that feeling of confidence to come and it is a long and often futile wait. Confidence generally follows action and seldom precedes action. The art of mediation is the art of learning to observe the mind (the thoughts) without entangling with them. This skill can be developed over a period of time; it is like developing the physical body by doing yoga, everyday practice is necessary. Various meditation techniques focus on learning to observe the mind, look at the flow of thoughts whilst being anchored on the breath, using mantras or chants as an anchor to separate oneself from the chatter of the mind.

Psychological flexibility is a skill that we can develop; it is skill that is useful in all walks of life, facing challenging times, improving trajectories of our lives and cultivating psychological well being. Psychological flexibility is to feel openly and without resistance, whatever has to be felt at that moment in time, be it fear, anger, sadness and to return back to state of balance. It can be compared to a state of psychological homeostasis. Just like physiological homeostasis is necessary for healthy living psychological homeostasis is equally important.

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Medical Records

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Medical records form an important part of the management of a patient. It is important for the doctors and medical establishments to properly maintain the records of patients for two important reasons. The first one is that it will help them in scientific evaluation of their patient profile, helping in analyzing the treatment results, and to plan treatment protocols. It also helps in planning governmental strategies for future medical care. But of equal importance in the present setting is in the issue of alleged medical negligence.

Manipulated medical records, failure to deliver X- ray films and statement of accounts of a hospital, and improperly maintained medical records were considered deficient services by Consumer Disputes Redressal Agencies.

Medical records are usually summoned in a court of law in the following cases :

1) Criminal cases for proving the nature, timing, and gravity of the injuries. It is considered important evidence to corroborate the nature of the weapon used and the cause of death. 2) Road traffic accident cases for deciding on the amount of compensation.
3) Labour courts in relation to the Workmen's Compensation Act. 4) Insurance claims to prove the duration of illness and the cause of death. 5) Medical negligence cases- these can be in criminal courts when the charge against the doctor is for criminal negligence or under the Consumer Protection Act for deficiency in the doctor's or hospital's care.

The minimum requirements of accurate medical records : 1) Name, fathers name, age, sex, occupation and address. 2) Date and hour of visiting. 3) Evidence of informed consent.
4) Brief history of present illness, past history, family history. 5) Findings of general physical and systemic examination. 6) Diagnostic aids used and any reports received concerning the patient. 7) Date and hour of consultation with details and opinion of consultant.
8) Provisional and final diagnosis. 9) Progress notes including clinical observations.
10) Instructions given to patient including diet.
11) Complications, if any. 12) Notations concerning lack of co-operation by the patient. 13) Failure of patient to follow advice or failure to keep appointments. 14) Details of treatment including any procedures / operations recommended or performed.
15) In emergency cases, specific clinical data, and observations should be noted periodically. 16) In patients, the condition at the time of discharge i.e. cured or relieved of complaints or referred to any other hospital or discharged on request or absconded should be noted.

Medical Council of India Guidelines on Medical Records : 1) Maintain indoor records in a standard proforma for 3 years from commencement of treatment. 2) Request for medical records by patient or authorized attendant should be acknowledged and documents issued within 72 hours.3) Maintain a register of certificates with the full details of medical certificates issued with at least one identification mark of the patient and his signature. 4) Efforts should be made to computerize medical records for quick retrieval.

How long should Medical Records be preserved ? 1) Routine case records should be preserved up to 6 years after completion of treatment and up to 3 years after death of patient. 2) Where there is chance of litigation arising for medical purpose of negligence, record should be preserved for at least 25 years specially in case of minors. 3) Medicolegally important record should be preserved up to 10 years, after which they can destroyed after making index and summery of the case.
4) There are certain records of hospital which are of public interest and are transferred to public record library after 50 years for release to public and those involve confidentially of

individuals are released only after 100 years.

Patients right about medical record :

1) Patient has the right to know what is in his records and is entitled to a copy of his hospital record on discharge by paying the cost of reproduction but not to the original record.

2) The medical records of a patient should not be given to any person without consent of patient. 3) The patient's record cannot be used in educational or diagnostic conferences or clinics or for publications without patients consent.

In UK to overcome the doctors concern to maintain patient's confidentiality, the following acts are in force. 1) According to the Data Protection Act, 1984, an individual should be informed by anyone holding computerised information whether that information includes his/her personal data and should be supplied with copies of it.2) The Access to Medical Reports Act, 1988 states that insurers and employers may not be shown a report until the patient has seen and commented on it and has consented to its disclosure. 3) According to the Access to Health Records Act, 1990 Patients have access to their health records.

Format for medical record : _____

Name of the patient: _____

Age: _____

Sex: _____

Address: _____

Occupation: _____

Date of first visit: _____

Clinical note (Summary) of the case: _____

Prov. Diagnosis: _____

Investigations advised with reports: _____

Diagnosis after investigation: _____

Advice: _____

Follow up: _____

Date: _____

Observations: _____

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अभिनंदन!

डॉ. रमेश नारायण गांगल यांना जीवन गौरव पुरस्कार!

महाराष्ट्र आरोग्य विज्ञान विद्यापीठाचा सन २०१९-२०२० या वर्षाचा **जीवन गौरव पुरस्कार** (**Life Time Achievment Award**) **डॉ. रमेश नारायण गांगल** यांना प्राप्त झाला आहे. डॉ. गांगल यांनी वैद्यकीय क्षेत्रात शिक्षणादी विषयात केलेल्या विशेष योगदानासाठी सदर पुरस्कार त्यांना महाराष्ट्र आरोग्य विज्ञान विद्यापीठाच्या वर्धापन दिनी म्हणजेच दि. १० जून २०२० रोजी त्यांना प्राप्त झाला.

डॉ. गांगल यांनी टिळक आयुर्वेद महाविद्यालयात शल्यतंत्र विषयाचे प्राध्यापक पदावर अध्यापनाचे काम केले. पदवीपूर्व, पद्व्युत्तर तसेच पीएच. डी. च्या विद्यार्थ्यांना मोलाचे मार्गदर्शन केले. तसेच टिळक आयुर्वेद महाविद्यालयाचे प्राचार्य म्हणून व शेठ ताराचंद रामनाथ रुग्णालयाचे अधिक्षक म्हणून केलेले कामही उल्लेखनीय असेच होते.

डॉ. गांगल राष्ट्रीय शिक्षण मंडळ संचलित आयुर्वेदाचार्य पुरुषोत्तमशास्त्री नानल रुग्णालयाच्या अधिक्षक पदावर कर्यरत असून राष्ट्रीय शिक्षण मंडळाचे कोषपाल पदाची जबाबदारी संभाळत आहेत. तसेच आयुर्वेद रसशाळा समितीचे अध्यक्षपदाची धूराही त्यांनी शीरावर घेतली आहे. शेठ ताराचंद रामनाथ रुग्णालयाच्या विश्वस्त मंडळाचे सदस्य म्हणूनही ते कार्यरत आहेत.

राष्ट्रीय शिक्षण मंडळ, सर्व घटक संस्था, शेठ ताराचंद रुग्णालय व आयुर्विद्या मसिक समितीच्या वतीने डॉ. गांगल यांचे हार्दिक अभिनंदन व हार्दिक शुभेच्छा!

Review Of Garbha Sharir From Ashtang Hriday Samhita Other Than Sushrut And Charak Samhita

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Introduction : In Asthang Hriday Samhita, some points are given about formation and growth of Garbha different than Sushruta and Charak Samhitas that remain aside during the study of Garbha Sharir. It is given in Asthang Hriday that Jeevatma get inspired by Swakarma (pre-birth earned karma) and Avidhyadi Klesha that is given in Yog Shastra and enters in Shukra Shonit Samyog (coincidence) to form Garbha. Involvement of Panch Mahabhutas in the growth of Garbha is explained in this Samhita. Function and the Reason Analogy , this basic and bold concept is also given here during study of Garbha Sharir. The disturbed Vata, Pitta and Kaphadoshas causes abnormalities in Garbha during its formation. So, the balance of these 3 doshas is very important during the conception. Importance of clear and calm mind in the formation of Garbha, is explained this Samhita. Like these some related concepts are also given in other samhitas but Asthang Hriday is the Samhita that simplifies these concepts, to make them use in treatment or counseling in the cases of Vandhyatwa, Anuvanshik Vyadhi.

Aim : To Study Garbha Sharir from Asthang Hriday Samhita other than Sushrut and Charak Samhita.

Objectives : 1) To study Garbha Sharir from Asthang Hriday Samhita other than Sushrut and Charak Samhita. **2)** To study Garbha from Sushrut and Charak samhita. **3)** To study Panchklesha from Patanjal Yogdarshan.

Materials and Methodology:

Materials : Primary data is collected from Ayurved Samhitas - Asthang Hriday Samhita, Sushrut Samhita, Charak Samhita, Patanjal Yogdarshan.

Methodology :

Study of Literature related to Anatomy of Garbha from Asthang Hriday Samhita

↓

Study of Literature related to some points in Asthang Hriday related to Garbha formation from Patanjal Yogdarshan

↓

Study of Literature related to Garbha Sharir from Sushrut and Charak Samhita

↓

Study of some specific points related Anatomy of Garbha from Asthang Hriday other than Sushrut and Charak Samhita.

↓

Observations and results is given as per the above study.

↓

Final interpretion of data and conclusion

Literature Review : Garbha Sharir is explained in Asthang Hriday Samhita, specifically in its Sharirsthan 1st chapter. This chapter includes the formation of Garbha and the factors responsible for it.

Formation of Garbha (A.H.Sha.1\1)

Jeevatma get inspired by pre-birth earned karma and Avidhyadi Klesha that is given in Yog Shastra and forms Garbha with Shuddha Shukra and Shonit by coinincidence (samyog).

Swakarma - i.e. Pre - birth earned karma. Whether the next birth is auspicious and pleasant or an ominous and rewarding one, depending on your conduct in this life, the seeker should try to purify himself or avoid sinful restraint. This will help to give a birth to the offspring which is free from pre-birth earned karma.

Klesha - This is nothing but Panchklesha that are described in Patanjal Yogdarshan.

Aviddhya, Asmita, Raag, Dwesha, Abhinivesha are Panchklesha. If there is any one of these klesha, Chittavrutti Nirodh will not be possible. Pa.Yo.D.2/3

Hetus of these klesha are explained in Charak Samhita in Sharirsthan. Cha.Sha.1/1

The work of dhee, dhruti, smruti do not take place properly, Kalsamprapti i.e. Rutuviparyaya and Ayog , Atiyog , Mithyayog of Indriya. These are the hetus that gives rise to Klesha.

To nullify these klesha, Kriyayog are explained in Patanjalyodarshan. Pa.Yo.D.2/1

If these Kriyayog are done to nullify or dilute klesha, the effect of Klesha on Garbha will be proper and precious.

Growth of Garbha - A.h.Sha.1/2

- Mahabhutas related to Beeja i.e.to Shukra and Shonit.
- Sukshmamahabhutas which comes with Jeeva
- Mahabhutas which are produced from Aahar Rasa of Mother (i.e.from what mother take as a food during pregnancy)

These all factors or mahabhutasare responsible for the growth of Garbha. Each mahabhuta takes its function and make possible growth of Garbha slowly. During the growth of Garbha, Vayumahabhut causes division function that requires at the cellular level and further. Tejamahabhut causes transformation i.e. it is responsible for the conversion of one structure to other upto the final formation of Garbha and further also it works. Like this all mahabhutas perform their functions for the growth of Garbha.

Function and the Reason Analogy A.h.Sha.1/4

The function is according to its reason so there is analogy between the Function and the Reason. Means there is symmetry between Karya and Karana. One example is given related to this concept. The melted iron when poured in different templates, it forms different shapes. Like this Jeeva goes in different Yoni and forms different Aakrutis like human being , cow, etc.

Importance of Vata Pitta Kaphadosha A.h.Sha.1/6

Vata, Pitta, Kaphadoshas are important in the formation of Garbha. The balance of these three doshas should be maintained properly always in body. But it doesn't happen always. Atleast before the conception these three doshas should not be disturbed in that couple. If they are disturbed then it causes abnormality in Garbha.

Factors responsible for formation of Garbha .. A.h.Sha.1/8

Shuddha Garbhashay, Aptyamarg, Rakta, Shukra , Vayu and Hriday gives birth to healthy child. The each and everything of these is very valuable. The clear and calm mind is the basic thing that will help to form the precious final product that is Garbha.

Definitions of Garbha in Sushrut and Charak Samhita

Shukra and Shonit coincidence occurs in Garbhashay and Aatma enters in it, also compulsion of Ashtaprakruti and Shodash Vikar occurs. That is called as Garbha. (SuSha.5)

According to Charak Samhita Garbha means coincidence (samyog) of Shukra and Shonit in Garbhashay. The entry of Jeeva occurs in this coincidence (samyog). Finally it is called as Garbha.

Acharya Charak says Garbha is a place of Panchamahabhut Vikar and Chetana. (Cha. Sha.4)

Vandhyatwa : There is first thing in Vandhyatwa that study of the factors which are essential for Garbhadharana.

1) Age - Male -25 yrs of age **Female-** 16 yrs of age. rather the condition is all dhatus of the male and female in that couple should be Paripakwa - According to (Su.Su.35/13)

2) Four factors according to Sushrut for Garbhadharana - Rutu (Rutukaal), Kshetra (Prajananavayav), Ambu (Aahar) and Beej i.e. Shukra amd Shonit are required. (Su.Sha.2/33)

3) Sattva and Aatma Vichar - Jeevatma get inspired by pre-birth earned karma and Avidhyadi Klesha that is given in Yog Shastra and forms Garbha with Shuddha Shukra and Shonit by coinincidence (samyog). A. H. Sha. 1/1

Thus at the time of Garbhadharana there is importance of Aatmapravesh and Klesharahit Mana.

4) Some other reasons like - Change in life style, increased mental pressure of work, overuse of mobile phones etc., pollution, junk food and irregular timings of meal. Also Alcohol, smoking are also one of the reasons. Very tight inner wearing reduces the sperm count.

5) Also Infertility can be disease generated in both male and females.

Anuvanshik Siddhant Vichar : Cha. Sha3

There is a major role of Panchmahabhutas on the Garbha at the time of its formation.

According to this Anuvanshik Siddhant any organ deformity , disease history of family e.g. Swas , Prameha etc. can occur.

This can be said as Hereditary diseases in modern.

Discussion : After studying these three samhitas thoroughly, it has been seen that each Samhita mention from its own point of view. The study of Anatomy of garbha from Asthang Hriday other than Sushrut and Charak Samhitas gives some specific points which can be applicable in regular Ayurvedic practice in a proper and simplified way. This will help to treat infertility cases and will prevent Garbha to get affected by hereditary diseases. In ayurvedic practice for infertility cases we have to think about Dosh-dushya, Sthanvaigunya, Karya-Karan bhava, Shukra-shonit, Mahabhutas and also about Swakarma and Klesha, involvement of Hriday (Mind) in reuirements for formation of Garbha. All these points if covered systematically such cases can be solved successfully. And all these are points are collectively mentioned in An Ayurved Samhita i.e. Asthang Hriday. So its detail study will make us to solve such cases of infertility and prevent affection of hereditary diseases to Garbha.

In Asthang Hriday Mahabhuta have been studied at three levels during the study of Anatomy of Garbha. Those are - at Beej level (Shukra and Shonit), Sukshma mahabhut with Jeevatma, Mhabbhutas from Aahar Rasa of Mother. This will cause direct effect on Garbha. Therefore, the diet of mother should be as per the Garbhini Paricharya mentioned in Samhitas. If Garbhini Paricharya is not followed, there may be any abnormality or any defect in Garbha.

Here Karya Karan bhava (The Function and The Reason Analogy) is seen. Also this Karya Karan Bhava concept is seen in abnormality in Garbha due to Dosha Dushti. Before conception the dosh- dushya should not be disturbed, their Shuddhi should be done. So, the Panchkarma, Beej Shuddhi, Garbha Sanskar etc should be there before the conception.

Asthang Hriday Samhita gives one more concept about the requirements for formation of Garbha. That are mentioned earlier. Out of these requirement of Hriday i.e. mind which should be clear and calm. It also means that there should have a wish to each individual in a couple to have a child. Also to have child with good nature both individuals in couple require a Shuddha (clear and calm) mind.This concept can be helpful to solve the cases of infertility. This is one additional concept given in this Samhita.

Asthang Hriday Samhita Specially mentions about Swakarma (pre-birth earned karma) and Klesha (Panchklesha). Acharya According to Asthang Hriday it is seen that the marriage in same or different Gotra doesn't matters. So the abnormality in Garbha may or may not be due to this Gotra concept, but to the Swakarma and Klesha no one is excused. And its importance is given in Asthang Hriday, Patanjal Yogdarshan as mentioned in literarure review. In Patanjal Yogdarshan, Kriyayog are given to nullify or dilute these klesha. Also the Sadvritta given in Asthang Hriday can help us to improve our Karma. Whether the next birth is auspicious and pleasant or an ominous and rewarding one, depending on your conduct in this life, the seeker should try to purify himself or avoid sinful restraint. This will help to give a birth to

the offspring which is free from pre-birth earned karma.

Thus the concepts related to Anatomy of Garbha in Asthang Hriday other than Sushrut and Charak Samhitas are discussed above which will definately give a beneficial knowledge.

Result : The concepts related to Anatomy of Garbha in Asthang Hriday other than Sushrut and Charak Samhitas are mentioned in a simplified way and can be applied practically in the treatment and counseling of inferitility cases and in prevention from Anuvanshik Vyadhi (herediatary diseases) to get affected to Garbha.

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A Critical Review Of Agni And Its Co-relation With Hypothyroidism In Sedentary Lifestyle

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Introduction : Hypothyroidism also called as underactive thyroid/ low thyroid, is a disorder of endocrine system in which the thyroid gland does not produce enough thyroid hormone.

This hypoactivity of the gland can be co-related with the agnimandya and ajirna and rasavaha srotas dushti lakshan according to ayurveda looking at the manifesting symptoms.

Objectives: 1) To study hypothyroidism and agnimandya and find its co-relation.

2) To establish the pathogenesis of hypothyroidism according to Ayurveda.

3) To establish the line of management of hypothyroidism.

4) To study the relation of sedentary lifestyle and agnimandya and hypothyroidism.

Materials And Methods :

Literature - References co-relating with the hypothyroidism were collected from ayurvedic compendia.

Review Of Literature - Hypothyroidism is a condition where the endocrine system fails to produce enough thyroid hormone.[1]

The Basic function of Thyroid gland is to regulate the metabolism of body.

So, when due to hyposecretion the metabolism slows down the symptoms such as fatigue, increased sensitivity to cold, constipation, dry scaly skin, weight gain, puffy face, hoarseness of voice, muscle weakness, elevated Blood Cholesterol levels, muscle ache, Bodyache, Stiffness and painful joints, Heavier than normal menstrual cycles, Thinning of hair, Slowed Heart Rate, Depression, impaired memory, enlarged thyroid gland[2].

Ayuveda dosent have any special concept of endocrinology. Its concept of rogas revolves around the Basic Trividha dosha and agni.

रोगा: सर्वेऽपि मंदाऽग्नौ

Which states that mandagni (decreased / wekeaned agni) is the root cause of all rogas (diseases).

Thus, here hypofunctional activity of thyroid can be very well co-related with agnimandya and ajirna, which further leads to simultaneous srotas dushti and sthan dushti.

Agni stated here not just means Jathargni But, also includes all the 5 Bhutagni and 7 dhatwagni.

Just like in hypothyroidism where there is hypofunction of thyroid gland, ayurveda states that mandata (decreased function) of any or all of the agni stated above will further lead to decreased Dhatu poshan and thus causing srotas dushti further leading to manifestation of symptoms.

Co-relation between hypothyroidism and agnimandya, ajirna and rasavaha srotas dushti is stated in the table below-

तत्रामे गुरु, उत्कलेद, अंगपीडनम	**Tiredness/ Fatigue**
शोथो गण्डाक्षीकुट	**Puffy face**
भ्रम मूर्च्छा	**Tiredness/ fatigue**
तृष्णा	**Thirst**
विविध वात वेदना	**Bodyache, muscle ache etc.**
मला वात अप्रवृतीश्च	**Constipation**
अश्रद्धा अरुची आस्यावैरस्य अरसज्ञता	**Anorexia**
तंद्रा	**Fatigue**
अंगमर्द	**Tiredness/ Fatigue**
पांडू	**Anaemia**
क्लैब्य	**Infertility, impotence**
वलय पलीत	**Thinning of hair, Alopecia**
अपाचित मेद मांस दुष्टि– गंडमाला, गलगंड	**Goitre**

Hetu- According to modern science, hypothyroidism is is an autoimmune disorder . But, in Ayurveda there is no concept as autoimmune or endocrinology. Ayurveda states mandagni as the root cause of all diseases. And, looking at the similarities between manifestation of hypothyroidism and agnimandya, ajirna and rasavaha srotas dushti, hetu can be stated as-

Ajirna hetu-

मात्रयाऽप्यभ्यवहृतं पथ्यं चान्नं न जीर्यती।

चिन्ता शोक भय क्रोध दु:खशय्याप्रजागरै:।। च.वि.२/९[३]

Rasavaha srotas dushti hetu-

गुरुशीतमतिस्निग्धमतिमात्रं समश्नताम्।

रसवाहीनि दुष्यन्ति चिन्त्यानां चातिचिन्तनात्।। च.वि.५/१२[४]

Samprapti- Samprapti i.e. the pathogenesis of occurrence of hypothyroidism which is co-related with agnimandya, ajirna and rasavaha srotas dushti.

Samprapti Ghatak- 1) Amajirna 2)Dushita rasaj roga

Hetu Sewan
↓
Dosha Sanchay Prakop
(especially kapha and vaat dosha)
↓
Agnimandya
↓
Amajirna
↓
Rasavaha Raktavaha Srotas dushti
↓
Kantha pradeshi sthan sanshray

↓	↓	↓
rasavaha srotas dushti	raktavaha,mamsavaha, medovaha and uttarottar dhatudushti	
↓	↓	
Dushita Rasaj Roga	1) mamsa meda dushti- galaganda, gandamala 2) asthi dushti- asthishool, angamarda 3) majja dushti- bhrama, angasaad, 4) shukra dushti- kalibya, impotence .	

Treatment- Taking in considerations the hetu and lakshanas the Ayurvedic line of management can be given as - 1) Pachan-pachan of the ama dosha and agni vardhan. 2)Rasapachan and rasa dhatu poshan improving rasa samvahan 3) Raktaprasadan. 4)Dhatu dushti pratyanik aushadha- considering the manifesting symptoms

sometime hypothyroidism manifests as amlapitta or ajirna at such times amlapitta pratyanik aushadha are to be given, sometimes it manifests as pandu, then pandu pratyanik aushadha are to be given, if there is mamsa meda dushti then mamsa meda dushti pratyanik aushadha will give relief in the manifesting symptoms. 5)Lifestyle changes- proper lunch and dinner timings, proper sound sleep, vyayam (exercise), avoiding fast and junk food etc. will help futher in improving the sign and symptoms.

Discussion:

आहारश्च विहारश्च य: स्याद्दोषगुणै: सम:।
धातुभिर्विगुणश्चापि स्रोतसां स प्रदूषक:।। च.वि.५/२३[५]

This states that in Ayurveda root cause of all roga being agnimandya ahaar vihaar play a major role in srotas dushti which further dushita dhatu and hampered poshana of all uttarottar dhatu.

विविधमशितं पीतं लीढं खादितं जन्तोर्हितमन्तरग्निसन्धुक्षितबलेन यथास्वेनोष्मणा सम्यग्विपच्यमानं कालवदनवस्थितसर्वधातुपाक– मनुपहृतसर्वधातूष्ममारुतस्रोत: केवलं शरीरमुपचयबलवर्ण– सुखायुषा योजयति शरीरधातूनूर्जयति च। धातवो हि धात्वाहारा: प्रकृतिमनुवर्तन्ते।। च.वि.२८/२[६]

Pachan (digestion) of this ahaar depends on the agni bala and agni being healthy, it futher converts this ahaar in the formation of shaarir dhatu.

Today's sedentary lifestyle of fast food and irregular lunch and dinner timings, irregular sleep, lack of exercise/ physical work etc. leads to increase in vikruta kapha and pitta dosha which causes agni to weaken down which further leads to formation of ama dosha thus further leading to dhatwagnimandya causing srotodushti (rasavaha srotas in this case) and then further uttarottar dhatu dushti if the hetu sewan continues.

Conclusion : Thus, hypothyroidism can be very well co-related with agnimandya, ajirna and rasavaha srotas dushti in sedentary lifestyle.

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डॉ. सुनंदा रानडे व डॉ. सुभाष रानडे फौंडेशन तर्फे उत्तेजनार्थ पारितोषिक प्राप्त लेख...

A Review Article On Management Of Pterygium

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Introduction - From Greek Pterygos means a little wing. A Pterygium is a triangular fibrovascular subepithelial in growth of degenerative bulbar conjunctival tissue over the limbus onto the cornea.

Pterygium is histologically similar to Pinguecula and shows degenerative changes. In contrast to Pinguecula pterygium encroach onto cornea invading the bowmans layer.

Pseudopterygium forms as a response to an acute inflammatory episode such as a chemical burn, corneal ulcer (especially if marginal) trauma and cicatrizing conjunctivitis.

Because early Pterygia are usually asymptomatic there has been little research on their natural history and treatment. Most Ophthalmologist commonly consider them as an insignificant problem until the lesion enchroach on visual axis. There are large number of opinions regarding management of Pterygium. Morphologically Pterygium consist of three distinct parts the cap, the head and the body. Stockers line is iron deposition in the basal layer of corneal epithelium anterior to the cap which indicates the chronicity of Pterygium.

Etiological factors include environmental exposure to sunrays, dust, hot climate hat favours growth.

Chemical irritants like fumes, gases decreased lacrimal secretions mainly exposure to UV rays.

UV radiations causes mutations in the P53 tumor suppressor gene. Thus facilitating abnormal proliferations of limbal epithelium.

Clinically it appears grey opacities near the limbus. It appears as a triangular fold of the conjunctiva with over hanging upper and lower borders and base merging into bulbar conjunctiva, cosmetic embarrassment, corneal astigmatism, diplopia may persist due to limitations of abduction. Irritations and grittiness due to localized dry in effects. Many surgical techniques can be used, though none is universally accepted because of variable recurrence rate. So proposed this topic to know which is fare treatment to deal with a Pterygium.

Aim - Study of different conservative and surgical management of a Pterygium.

Objective - 1) To evaluate a gold standard treatment in the management of Pterygium.

2) To draw a merits and demerits of all surgical techniques.

Material and method - Review articles from international journals and clinical text books of Ophthalmology.

Treatments - There are many disputes in Ophthalmological field regarding optical, medical and surgical, management of pterygium from early in the disease, lubricating medications, hazards of UV rays can be avoided by protective spectacles.

Surgical approach take an important role in failure from above mentioned treatment. A pterygium of 3mm and often more will induce astigmatism. They are likely to be associated with more than 1D of astigmatism and cause blurring of uncorrected vision. Recently The Ophthalmology dept. From AL AZHAR Medical Institute published one paper which concluded that Pterygium causes reversible impairment of visual acuity either by mechanically induced astigmatism or by encroachment on papillary area obscuring visual axes. So Pterygium surgery can be considered as a Refractive surgery and the mean post operative refractive changes are nearly similar irrespective of type of pterygium surgery. Main challenge is recurrence. Many surgical techniques can be used,though none is universally accepted because of variable recurrence rate. Many Ophthalmologic

surgeons prefer to avulse the head from underlying cornea, advantage is that quicker epithelization, minimal scarring and resultant smooth corneal surface. Regardless the technique used the excision of pterygium is gold standard step for repair.

There are certain surgical indications as follows - **1)** visually significant induced astigmatism. **2)** Threat to involvement of visual axis **3)** Severe symptoms of irritations.
4) Cosmetic purpose.

Surgical Techniques - 1) **Bare Sclera -** This involves excision of head and body of the Pterygium (diseased conjunctiva) and cauterization of tenons layer there is high recurrence rate between 24% to 89% have been documented. After this surgery technique one common complain is raised, fleshy red pedunculated lesion from conjunctiva having mucoid/mucopurulent discharge and it does not resolve spontaneously and may be excised by surgeons. This method is cosmetically not accepted so avoided in young age patient.

2) Auto Graft Technique - This procedure involves obtainin an autograft from either fornix (sup/inf) and suturing the graft over exposed sclera after excision of pterygium. Careful dissection of tenons tissue from conjunctival graft and recipient bed needed. Dr. Lawrence. W. Hirst from Australia published one article which recommends a large incision for pterygium excision and large graft reported a very low recurrence rate.

3) Amniotic Membrane Grafting - Also used to prevent Pterygium recurrence. Most researchers suggested it is the basement membrane that contains factors responsible for inhibiting inflammation and fibrosis and promoting epithelization. A distinct advantage of this technique over conjunctival autograft is only the preservation of bulbar conjunctiva. Amniotic membrane is typically placed over bare sclera with basement membrane facing up and stroma facing down. Recent techniques uses fibrin glue to help graft fixation with episcleral tissue either it may be Autograft/Allograft/Amniotic membrane graft.

4) Old method was Mc Raynolds operation where transportation of pterygium in the lower fornix practiced which was cosmetically not accepted so this surgery is not a choice nowdays.

5) Surgical excision with Lamellar Keratectomy and Lamellar Keratoplasty required if visual axis affected or in deeply infiltrating recurrent Pterygia.

Adjunctive Treatment - It were noticed that surgery is not only the choice in recurrent behavior of Pterygium thus adjunctive treatment can be used in the management of pterygium excision. Studies have shown that recurrence rates had dropped considerably with addition of these therapy.

1) MMC used as an adjunctive treatment because of its ability to inhibit fibroblast. Two forms of MMC are currently used

a) Intraoperative application of MMC directly to the sclera bed after Pterygium excision.

b) post operative topical use of MMC drops.

2) Beta Irradiation - It inhibits mitosis in the rapidly dividing cells of a pterygium. This therapy have certain adverse effects as its radiations Scleral necrosis, melting of sclera, endophthalmitis and cataract formation. Effects of MMC are equivalent to Beta irradiation.

Summary - Conjunctival Autograft surgery is found to be safe, minimal of its recurrence and cost effective than else. How ever Amniotic membrane graft and intra operative MMC also incorporated as Adjunctive therapy. The post operative refractive changes are nearly similar in Bare sclera method or conjunctival autograft method.

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Ayurvedic Management In Atyayik Avastha With Special Reference To Medical Emergencies

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Introduction : Ayurveda is a science which is Anadi, Ananta and Shashwat. It is mindset of people that Ayurveda can treat only chronic diseases. To start with we first need to understand what does it mean by Atyay? Atyay means destruction. The disease which causes destruction of human being is Atyayik. The medical emergency which can't give enough time for the treatment is atyayik (avastha) condition. In ayurvedic context there are synonyms used for the atyay are Ashupranahara, Sadyapranhara, Ashukari, Shighraprannashaka etc. From above knowledge we can see that our science is ancient which is having atyayik conditions at that time also. There are references in Charak Nidanasthana and Sushrut Sutrasthana giving examples in sutrarupa for atyayik avastha. In sutrasthana Charak has stated that Visha, Agyat Dravya, Agni and Shastra are so harmful to human being that it can kill them in no time, in such a way atyayik conditions are harmful. Few conditions such as high-grade fever, haemorrhage, any kind of severe pain, Shvasakrucchata, drowning, abdhatukshaya can be treated by Ayurveda. The atyayik vyadhi can be classified as Swabhavataha atyayik and Marmashrit atyayik. Hence, here an attempt has been made to lighten up our ancient science. Charak has clearely mentioned mrudu,daruna and sadhya, asadhya vyadhi prakara. Charak has used word Daruna for acute conditions. It shows daruna is not incurable, it means acute but curable. They may kill the patient if they are either not treated at all or wrongfully treated. This clearly states the condition of emergency which requires prompt and accurate treatment. Ayurveda has, thus, given top priority for treating emergency conditions.

Aims And Objectives : 1) To highlight the concept of emergency management (atyayik chikitsa) in Ayurveda 2) To study the ayurvedic literature for the references of the management of atyayik chikitsa.

Materials And Methods : 1) Relevant ayurvedic literature as well as modern literature. 2) Old ayurvedic theories.

Review Of Literature : Many books were destroyed during medieval period. All the ancient literature we get is outrageous work of a few scholars. An example can be given of Bhavprakasha, there is description of 33 types of Sannipat Jwara, which are described in other Ayurvedic texts that are not available today. The description of Sannipat Jwara is the description and treatment of acute febrile emergencies. Charaka says, 'Occurrence or suppression of diseases occurs as a result of variations in Nidan (Chronological factors) intensity of Doshas and susceptibility of Dhatus.' Chakrapani commencing on the 2 nd phase clear that when these 3 factors viz. Nidan (etiological factors), Dosha and Dushyas (body elements) unite or associates, rapidly associate super strongly, produce diseases very rapidly or with strong manifestations of diseases or with all the signs and symptoms of the diseases. This condition is called acute diseases or emergency. Thus when the etiological factor is powerful, the association or morbiding of doshas is also very great. Both these factors vitiate the body, elements or Dhatus rapidly. This rapid morbiding is called emergency or acute condition of disease.

Emergency Conditions Mentioned In Ayurvedic Samhitas With Their Treatment : It is necessary to identify the medical emergencies in daily practice. The practicing

physician must be attend those emergency priorly. The emergency can be medical, surgical, gynaecological, paediatrics or forensic. If the ayurvedic physician trained to handle these conditions then must have to assure patient and relatives and if not trained to perform operative procedure then can do primary management and refer patient to respective speciality.

Medical Emergencies:

1) Breathing difficulties : Breathing difficulties commonly found in diseases of respiratory system. In Ayurveda it is stated under Pranvaha strotas. Pranvaha shtodushti occur mainly due to vitiation of Vata and Kapha dosha.

Tamak shawash vegavstha is life threatening medical emergency mentioned in Ayurveda. Fever, syncope (murccha) are predominating symptoms of vegavastha. Acharya Charak, Sushrut and Vagbhat stated that this condition is life threatening and need aggressive treatment.

i) Aasan (position) - आसिनो लभते सौख्यं, शयानः श्वासपीडितः। च.चि.१७/६०

ii) Broncho dilatation therapy- आक्त लवणतैलेन नाडीप्रस्तरसंकरैः। च.चि.१७/७१

iii) Sadhyo vamana- कफाधिके बलस्ये च वमनं सविरेचनम। च.चि.१७/८९

2) Acute abdominal pain : There are certain conditions mentioned in Ayurveda related to abdominal pain and some time it may leads into medical emergencies.

Cchidrodar, Baddhgudodar, Antravruddhi (Strangulated hernia), Tivra agnyashaya shotha (Acute pancretitis), Antarlohit (internal bleeding) these are some conditions and treatment also mentioned. Shalyakarma (surgical procedures) in above conditions stated in Sushrut Samhita.

3) Murccha (syncope) and Sannyas (Comatose stage) : Murccha (syncope) is a condition occur due to vitiation of Vatadi doshas. Acharya Charak mentiones that in murccha, there is sandnyavaha strotodushti and indriya vikruti. This is reversible condition.

In Madhavnidan stated that -

काष्ठीभूतो मृतोपमः, प्राणैर्विमुच्यते शीघ्रं मुक्त्वा सध्यःफलां क्रियाम।। मा.नि./मूर्च्छा/२३

Emergency management of this condition stated in charak Samhita :

i) Trasan chikitsa ii) Tikshna Anjan prayog
iii) Pradhaman nasya

Sannyas (comatose stage) - This is emergency condition occurs due to cerebral ischemia, poisoning, metabolic disorders, head injury etc. Charak clearly mentioned that if patient remain untreated in this condition it may leads to death. Sandnyaprabodhan, bloodletting, trasan chikitsa is helpful in it.

4) Management of Epilepsy (Apasmara)- Epilepsy is known as Apasmara in Ayurveda. There is aggravation of dushta doshas in the brain. Some symptoms like convulsions, lock jaw, involuntary movements of body part, syncope, post ictal phase clearly stated in ayurvedic samhitas which are later described in modern medicine.

Ayurvedic treatment of acute condition of Epilepsy i.e. sandnyaprabodhana, Trasan chikitsa, tikshna anjana, dhumpana, nasya. For prevention of epilepsy some herbal drugs mentioned as Bramhi, Vacha, Jatamanshi, Sarpagandha, Khurasani Ova etc.

Surgical Emergencies : In Ayurveda all surgical emergencies sited under Shalyatantra.

1) Treatment of fracture and Dislocation: It is stated under heading of 'Bhagnachikitsa'.

Management of orthopaedic emergencies was challenging in ancient era. There was no facility of imagining. The principles stated by Acharya Sushrut regarding 'Bhagnachikitsa' are remain unchanged till the date. There are some principles which Acharya Sushrut mentioned for skeletal injuries are almost same as that of modern concepts.

i) Anchhan ii) Pidan iii) Sankshepana
iv) Bandhan

2) Management of Haemorrhage (Tivra Raktasrava) : Blood is essential contain of human body. Acharya charak said-

जीवनहेतुधातुरुपं शोणितम। च.सि.६/७९

Active loss of blood from human body is a medical emergency. In sushrut Samhita some emergency treatment protocol mentioned as 'Shonitsthapan'.

Following procedure can be done in active bleeding condition:

Avpidan	Sandhan	Skandan
Pachan	Dahan	Sivan
Anthaparimarjan	Dhamanivedha	Raktapana

Gynaecological And Obstrectics Emergencies : These are the most sensitive conditions in medical practices. It is necessary to survive both foetal and maternal life.

Some emergency conditions mentioned in Ayurveda :

i) Mudhgarbha chikitsa - Management of fetal malformation.

ii) Vitap chhed - Episiotomy during normal labour.

iii) Udarpatan shashtrakarma - L.S.C.S.

iv) Garbhapata - Abortion.

Medicolegal Emergencies : Some medicolegal emergencies and its treatment mentioned in ayurvedic texts :

i) Dhatu vishaktata - metal poisoning.

ii) Sarpa damsha- snake bite.

iii) Vrushcchik damsh- Scorpion bite.

iv) Vish pita- organo phosphorus poisoning.

v) Jalnimajjan - Drowning.

Treatment mentioned : Amashaya dhavan, Vaman, Virechan, 24 vish chikitsa upakram mentioned in Charak samhita.

Observation : During study, it is observed that, following emergency conditions (Atyayik avastha) and treatment according to condition mentioned in ayurvedic samhitas:
(See Table 1 and 2)

Discussion : The study of literature of Ayurveda shows that ayurvedic scholars were aware of medical, surgical and gynaecological emergencies. They have described appropriate management of it. It is very important to have thorough knowledge of Ayurveda and have faith on Apta (teacher). To

(Table 1)
Observation -1:

Atyayik avastha	Modern correlation	Treatment mentioned in ayurvedic samhitas
Swash	Breathing difficulties	Aasan (position), broncho dilatation therapy, sadhyo vaman (ch.Chi. 17)
Murchha, sannyas	Comatose stage	Sandnyaprabodhana, raktamokshana, trasan chikitsa (ch. Su.24, ma.ni. murchha chi.)
Apasmara	Epilepsy	Sandnyaprabodhana, medhya aushadhi prayog, Panchakarma-tikshna anjan, dhumpan, nasya, vaman (ch. Chi. 10)
Bhagna	Fracture and dislocation	Bhagnachikitsa (anchhan, pidan, sankshepana, bandhana) (su. Chi. 3)
Tivra raktasrava	Haemorrhage	Shonitshapana (su. Su.14)
Tivra udarshool (antravruddhi, antralohit, cchidrodara, baddhgudodar etc.)	Acute abdominal pain	Shalyakarna
Garbhini and prasav vyapad (mudhgarbha, garbhapata, garbhasang, vilambita prasav etc)	IUGR, abortion, foetal distress, failed induction of labour etc.	Garbhapata, vitap chhed (episiotomy), udarpatan shashtrakarma (LSCS), Garbhasthapana, yonidhupana etc. (su.ni.8, ma.ni. ch.sha.8)
Vishaktata (sthavar vishaktata, jangam vishaktata)	Metal poisoning, OPP, snake bite, scorpion bite etc.	24 chikitsa upakrama (amashaya dhavan, vaman, virechana etc) (ch.chi-23, su.kalpa-2,3)

(Table 2)

Observation-2 :

While studying ayurvedic literature related to emergency conditions (atyayik avastha), it is observed that, there is solution stated in classical ayurvedic texts related to each and every medical condition. Acharya charak mentioned trividha aushadha in sutrashana i.e. antahparimarjan, bahiparimarjana and shashtrapranidhana. It can be used in such conditions respectively.

Some conditions mentioned in this paper can be treated with internal medications, some conditions needed surgical procedures and some emergencies can be treated with panchakarma procedures.

Atyayik avastha	**Treatment**
Swash	Abhyantar aushadhi, panchakarma
Murchha, sannyas	Abhyantar aushadhi, panchakarma
Apasmara	Abhyantar aushadhi, panchakarma
Bhagna	Shalyakarma, some procedures from panchakarma
Tivra raktasrava	Shalyakarma, Abhyantar aushadhi
Tivra udarshool (antravruddhi, antralohit, cchidrodara, baddhgudodar etc.)	Shalyakarma, Abhyantar aushadhi
Garbhini and prasav vyapad (mudhgarbha, garbhapata, garbhasang, vilambita prasav etc)	Abhyantar aushadhi, panchakarma, Shalyakarma
Vishaktata (sthavar vishaktata, jangam vishaktata)	Abhyantar aushadhi, panchakarma

treat medical emergency, it is necessary to have clinical exposure as well as strong confidence. An ayurvedic practioner should be aware of applied aspects such as marma, nidana, vishas and ayogya panchkarma. We can try to understand thoroughly the sutras of Ayurveda in modern light. In this paper some examples cited to justify that ayurveda can be useful in life threatening and emergency conditions.

Conclusion : Atyayika chikitsa is not new to Ayurveda. It covers both treatment and prevention. Here it may be concluded that ayurvedic medicine is useful in management of emergency condition.

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Conceptual Review Of Etiology Of Vatarakta As Lifestyle Disorder In Present Era

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Introduction - Lifestyle disorders are the disorders caused because of changing food habits, inadequate sleep, lack of exercise and stress. They can be prevented with the help of Ayurveda treatment and lifestyle modification. The lifestyle includes mainly dincharya, rutucharya, aahar and vihar of the individual. The unhealthy changes in any of the above are the key factors which results in lifestyle disorders, Vatarakta is the lifestyle disorder which includes the vitiation of vatadosha with aggrevated raktadosha. It is a painful condion which involves inflammation at joints, especially small joints with pricking sensation, pain, burning sensation, itching etc. The causes (Hetus) of Vatarakta described in samhita granthas are very relevant in present era. It can be prevented by modifying the lifestyle with the help of Ayurved.

Review Of Literature - Vatarakta has been described by Acharya Sushrut in Vatvyadhinidan adhyay in detail with separate hetus (causes) and lakshanas (symptoms). It has been given importance among vatavyadhi as the major disease.[2] It includes the aggrevated rakta with obstructs the vitiated vatadosha and the later again aggrevates the rakta which results in Vatarakta.

In Charaksamhita also it is been described as Adhyavata, means the disease of the rich people. It is mainly due to sedentary lifestyle and unhealthy food habits. The aggrevated vata dosha along with the vitiated rakta affects the joints.[1]

Acharya Madhav has also described the above mentioned similar samprapti (pathology) of the disease.

In Ashtanghrudya, similar pathology has been described and the disease is known as Vatarakta, Vatabalas, Adhyarog and Khud. It is common in sukumar (the ones which can not tolerate extreme conditions like heat, cold, work etc.) and achankramanshee (the ones who are habitual to sit for long timewith less movements) persons.

The common factors which have been described in Ayurvedic texts are as follow -

Aaharaj (related to food)- Ahara (food) has been described as the one which is important for vyadhinirmiti (disease) if not proper.[1]

- Viruddhanna (fish and milk, frutis and milk etc).
- Vidahi anna (spicy, pungent, oily food).
- Excessive Sour, salty food.
- Alcohol consumption.
- Food vitiating vatadosha like excessive dry and cold food such as bakery products, preserved food.

Viharaj (related to behavior)

- Excessive travelling
- Sedentary lifestyle
- Vidhihin Jagaran
- Vidhinin Swap
- Vidhinin maithun
- Excessive exposure to heat, suppression of natural urges vitiates vata dosha
- Unhealthy lifestyle with respect to particular season (rutu)- not following specific, appropriate rurtucharya (lifestyle according to specific season).

Symptoms - described in ayurvedic texts are as follows -

• Inflammation at joints especially small joints of foot initially
• Pain, itching, burning sensation at joints
• Pricking sensation, numbness at joints
• The symptoms are compared with the spread just like the the akhuvisha (poisoning by mouse).
• According to each dosha, the symptoms differ with combination and dominance by the related dosha type as vata, pitta and kapha predominance.
• The disease is classified as uttan and gambheer avastha related to the severity of symptoms.

Apart from the above mentioned causes, the hectic working schedules, unhealthy, untimely eating food habits are the vatavitiating factors nowadays.

Materials And Methods - Primary data is collected as Review of literature from samhita granthas and web references from related papers.

Discussion - The important lifestyle disorder Vatarakta is a major articular disease which is increasing day by day in present era. The etiology of the disease includes all the factors related to food habits like eating vataprakopaj aahar, raktadushtikar aahar, eating food in improper way vitiates the vatadosha like while watching mobile, Television, eating food without proper chewing, eating too fast or too slow, eating to hot or too cold food, excessive talking while eating etc. The behavioural causes include excessive driving with hanging the feet for longer duration, sedentary lifestyle which is too relevant in this era with minimal or no movement, inadequate or no exercise, sleeping late night or sleeping during daytime. All these factors are affecting the heath of the individual and results in Vatarakta.

Conclusion - Vatarakta, the lifestyle disorder can be prevented with the help of Ayurveda. It can be corrected by the following the Rutucharya, Dinacharya and the healthy food habits described in Ayurveda.

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अभिनंदन!

डॉ. केतकी नंदकिशोर बोरसे
COVID 19 योद्धा!

डॉ. केतकी बोरसे यांनी सामाजिक जाणीव व वैद्यकीय व्यवसायाच्या कर्तव्यबुद्धीतून धोका पत्करुन कोव्हिड योद्धाचा वेष परीधान करुन महापालिका व एका सामाजिक संघटनेच्या माध्यमातून पुण्यातील मंगळवार पेठ, येरवडा येथील झोपडपट्टीत घरोघरी जावून प्रत्येक व्यक्तीची वैद्यकीय तपासणी करुन संशयीत बाधीतांना पुढील चाचण्यांना प्रवृत्त करुन कोरोनाच्या विरुद्ध मोहीमेत आपला वाटा उचलला.

डॉ. केतकी या टिळक आयुर्वेद महाविद्यालयाच्या माजी विद्यार्थीनी आहेत.

रा.शि.मंडळ, टिळक आयुर्वेद महाविद्यालय व आयुर्विद्या मासिक समितीच्या वतीने डॉ. केतकी यांचे अभिनंदन!

दृष्टीक्षेपात
राष्ट्रीय शिक्षण मंडळ
(२०२०-२०२५)

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विषय १) –
डोळ्यामध्ये कचरा/बर /धूळ जाणे

(Foreign body in eye) -

मित्रांनो, आपण गाडी चालवत असताना किंवा इतर वेळी आपल्या डोळ्यात धुळीचा कण किंवा बारीक लोखंडची बर किंवा तत्सम कचरा जातो, डोळ्याची खूप आग होते. डोळा लाल होतो . डोळ्यातून पाणी येते, आपण नकळत डोळा खूप चोळतो. समोरचा माणूस डोळा तपासून म्हणतो – 'मला डोळ्यात बर दिसतीये . मी काढतो.' या सगळ्या घटनेत धोके काय असतात?.. काय करावे?.. काय करू नये?.. या घटनेच्या वेळी त्याला डोळ्याच्या डॉक्टरांकडे नेईपर्यंत काय प्रथमोपचार कराल?

उत्तर– मित्रांनो सगळ्यात पहिल्यांदा एक लक्षात ठेवा डोळ्यात काही कचरा गेल्यास डोळा फार जोरजोरात चोळू नये कारण त्यामुळे आतली foreign बॉडी डोळ्याच्या आतील भागाला जखम करायची शक्यता असते. डोळ्यातील सर्वात महत्वाचा भाग म्हणजे बुबुळ (Cornea) जो गोल काळा भाग डोळ्याच्या मध्यभागी दिसतो तो (Cornea) होय. तो अतिशय नाजूक असतो. डोळा चोळल्यामुळे किंवा डोळ्यात काही कचरा गेला व तो नेमका (Cornea) वरती म्हणजे डोळ्याच्या काळ्या भागावर गेला असेल तर डोळा चोळल्याने किंवा तिथून तो काढायचा प्रयत्न अकुशल व्यक्तिने केल्याने त्याठिकाणी बुबुळावर ओरखडा उठण्याची (Corneal abrasion) शक्यता निर्माण होते. त्यामुळे दृष्टिमांद्य निर्माण होते अशा वेळी बरेचदा लोक घरात असेल तो आय ड्रॉप डोळ्यात टाकतात चोळल्याने / घासल्याने बुबुळावर ओरखडे उठले असतील आणि अशा वेळी चुकून स्टिरॉइड चे आय ड्रॉप डोळ्यात टाकले तर त्याठिकाणी अपारदर्शकता येऊन (Corneal opacity)- कायमस्वरूपी अंधत्व येऊ शकते. (त्यामुळे डॉक्टरांनी अशा वेळी स्टिरॉइड आय ड्रॉप कधीही देऊ नयेत उदा. Pyrimon, Ciplox-D,Zoxan-D- त्यामुळे Corneal abrasion चे रूपांतर Corneal opacity मध्ये होऊन कायमस्वरूपी अंधत्व येऊ शकते) हे स्टिरॉइड चे आय ड्रॉप सर्वसामान्य लोकांमध्ये व डॉक्टरांमध्ये फार लोकप्रिय असतात एखी सुद्धा त्याचा अतिवापर केल्यास अकाली मोतीबिंदू (Cataract) होण्याची शक्यता असते.

काय करू नये–

सर्वसामान्य अकुशल व्यक्तींनी डोळ्याच्या काळ्या भागावर कचरा असल्यास तो काढण्याचा प्रयत्न करू नये. ग्रामीण भागात जिभेने इत्यादी unhygenic पद्धतीने डोळ्यातील बर/कण काढतात – तसे करू नये. डोळा जोरात चोळू नये.

काय प्रथमोपचार करावेत?

डोळ्याच्या काळ्या भागावर (बुबुळावर) कचरा दिसत असल्यास – तो डोळ्याच्या पांढऱ्या भागावर आणण्याचा प्रयत्न करावा–डोळ्याच्या पांढऱ्य भागावरील (Conjunctiva) कचरा ओल्या कापसाने टिपून घेता येतो. त्याठिकाणावर घर्षण झाले तरी दृष्टीला धोका पोहचत नाही. डोळ्याच्या काळ्या भागावरील कचरा पांढऱ्या भागावर आणण्यासाठी डोळा स्वच्छ पाण्याने धुऊन घ्यावा. (Eye wash) - Eye वॉश देताना झोपवून पाणी डोळ्याच्या आतल्या नाकाच्या बाजूने सोडावे व कानाच्या बाजूने बाहेर येऊ द्यावे त्यामुळे प्रवाहाबरोबर काळ्या भागावरील कण पांढऱ्या भागावर वाहत येईल व नंतर तो सहज उचलून घेता येईल. काही कारणांनी तो बर/कण काळ्या भागावरून निघाला नाही तर तो जबरदस्तीने काढण्याचा प्रयत्न करू नये, त्या व्यक्तीचे दोन्ही डोळे Eye shield लावून बंद करावेत व जवळच्या डोळ्याच्या डॉक्टरांकडे घेऊन जावे (उघड्या डोळ्याने नेल्यास तो चहू बाजूला बघत असल्याने बुबुळाची हालचाल होते व आतमध्ये बुबुळावर ओरखडे उठत राहतात.)

थोडक्यात–

काळ्या भागावरील (बुबुळांवरील) कचरा काढण्याचा अकुशल व्यक्तींनी प्रयत्न करू नये. काळ्या भागावरील कचरा पांढऱ्या भागावर आणण्यासाठी डोळा स्वच्छ पाण्याने धुवावा (आय वॉश). ते न जमल्यास दोन्ही डोळे Eye shield ने बंद करून मग डोळ्याच्या डॉक्टरांकडे न्यावे.

कार्यकारी संपादकीय

''सर्वेपि सुखिनः सन्तु, सर्वे'' सन्तु निरामयः!''

– डॉ. अपूर्वा संगोराम

आयुर्विद्या मासिकाच्या कार्यकारी संपादकपदाची जबाबदारी स्वीकारल्यानंतर प्रथमच आपल्यासमोर येताना मला मनापासून आनंद होत आहे.

सध्याच्या काळात जगात कोरोना व्यतिरिक्त दुसरा कोणताही विषय प्राधान्याने चर्चिला जाताना दिसत नाही. मग त्याची देशातील रोजची आकडेवारी असो, बरे होणाऱ्यांचे प्रमाण असो, की त्यावर निर्माण होणाऱ्या औषधांबाबत असो. सध्याच्या परिस्थितीत व्यक्ती म्हणून शारीरिक, मानसिक, आर्थिक स्तरावर प्रत्येकाचाच कस लागतो आहे. घराबाहेर पडणाऱ्यांच्या मनात भीती आहे. त्यामुळे अनलॉक–१ सुरू होऊनही बाजारपेठांमध्ये आर्थिक चहलपहल होताना दिसत नाही. त्यामुळे हातावर पोट असणाऱ्या वर्गाची कुचंबणा होत आहे. अनेक मजूर भांबावून जाऊन स्थलांतर करताना दिसत आहेत. तिथे जाऊन काय करायचे आहे, हे त्यांनाही माहीत नाही. मध्यमवर्ग सर्व माहिती असल्यामुळे सरकारने घालून दिलेले नियम इमानेइतबारे पाळण्याचा प्रयत्न करतो आहे. कोरोनाबाधितांचे वाढते आकडे, त्यावर येऊ घातलेली औषधे, चीनचे धोरण यावर तावातावाने चर्चा करताना दिसतो आहे.

उच्चस्तरीय वर्गाला रोजच्या जगण्याच्या धडपडीची काळजी नसली तरी मानसिक स्तरावर कुठेतरी अस्वस्थता जाणवत आहे. त्यामुळेच या सर्वच स्तरातील लोकांसाठी शारीरिक, मानसिक आणि आर्थिक स्तरावर कुठेतरी समन्वय निर्माण होण्याची गरज भासू लागली आहे. शारीरिक स्तरावर, रोजच्या आरोग्यपूर्ण सवयी, कुठेही बाहेर जाताना मुखपट्टीचा वापर, बाहेरून आल्यानंतर किंवा कोणत्याही वस्तूला स्पर्श केल्यानंतर खसखसून हात धुणे, कोठेही न थुंकणे, सॅनिटायझरचा वापर यासारख्या आजवर न अंगिकारलेल्या सवयी आत्मसात करण्याची गरज आता लक्षात येऊ लागली आहे. 'कोरोनाला पळवून लावू' या ब्रीदापासून 'आता आपल्याला कोरोनाबरोबरच राहायचे आहे', इथपर्यंत आपण आलो आहोत.

मानसिक स्तरावरही सध्याचा काळ कसोटीचा आहे. आर्थिक झळ सोसून कुटुंबाच्या गरजा पूर्ण करत, बाहेरच्या एकाकी वातावरणाला तोंड देत, स्वतः, मन, मनाची शांतता अबाधित राखणे हे अत्यंत गरजेचे झालेले दिसते आहे. ज्यांना हा समतोल राखता येत नाही, ते आत्महत्येसारख्या मार्गाला कवटाळू पाहात आहेत.

आर्थिक स्तरावरही नुकसानच होताना दिसते आहे. आयटीसारख्या क्षेत्रातील अनेक कंपन्यांमधून नोकरकपात होताना दिसते. हॉटेल्स, चित्रपटगृहे, मॉल्स, जिम यासारखे अनेक व्यवसाय ठप्प झाले आहेत. त्यामुळे त्यावर अवलंबून असणाऱ्यांना जगण्याचेच प्रश्न भेडसावत आहेत.

असा हा कोरोनाकालीन सद्यस्थितीवर सर्वांगीण विचार केल्यानंतर स्वाभाविकच पुढे काय, हा प्रश्न उरतोच. जगभरातील अनेक तज्ज्ञ सध्या कोरोनावरील औषधाच्या शोधासाठी जिवाचा आकांत करीत आहेत. या घडीला या विषाणुला रोखण्यासाठी कोणतीही औषधयोजना उपलब्ध नाही, ही वस्तुस्थिती असल्याने कोरोनाविरुद्धची लढाई ज्याची त्यालाच लढावी लागणार आहे. जगातील अनेक देशांमध्ये या विषाणूने घातलेले थैमान आणि त्यामुळे होत असलेली मनुष्यहानी हा सगळ्यांच्याच चिंतेचा विषय झाला आहे.

आपल्या मागच्या कितीतरी पिढ्यांनी न पाहिलेली अशी ही अभूतपूर्व स्थिती आहे. प्लेगच्या काळातील कटू आठवणी ज्यांनी पूर्वजांकडून ऐकल्या असतील, त्यांना आजची स्थिती त्याहूनही गंभीर आहे, हे लक्षात येऊ शकेल. प्लेगच्या काळातही त्यावरील औषध निर्माण होईपर्यंत लाखो जणांना मृत्युला कवटाळावे लागले होते.

आपल्याला हे माहीतच आहे की, कुठल्याही नवीन औषधनिर्मितीसाठी सर्व शास्त्रशुद्ध कसोट्या पार कराव्या लागतात. त्यासाठी किमान दीड वर्षांचा कालावधी जावा लागतो. नवीन औषधाचा फॉर्म्युला शोधण्यापासून, त्यानंतर त्याची सुरक्षितता आणि उपयोगिता बघण्यासाठी प्राण्यांवर, स्वस्थ व्यक्तींवर व्याधिग्रस्तांवर प्रयोग करणे आवश्यक असते. या चाचण्यांच्या मल्टिसेंट्रिक ट्रायल्स घेणे आवश्यक असते. या सर्व चाचण्यांचे निकाल आल्यानंतरच नवे औषध वापरासाठी उपलब्ध होऊ शकते.

कोरोनासाठी जगातल्या अनेक देशांच्या सरकारांनी या औषध निर्मितीसाठी आवश्यक असणाऱ्या संशोधनासाठी करोडो डॉलर्सची गुंतवणूक केली आहे. असे जरी असले, तरीही वर उल्लेख केल्याप्रमाणे औषध निर्माण होण्यास विशिष्ट कालावधी हा जावाच लागतो. याचे कारण त्या औषधाच्या विविध पातळ्यांवर होणाऱ्या चाचण्या, त्यांचे निष्कर्ष यासाठी वाट पाहणे गरजेचे असते.

त्यामुळेच हे औषध किंवा लस येईपर्यंत सर्वसामान्य माणसांनी आयुष्याचे शास्त्र असे म्हणवणाऱ्या आयुर्वेदाने सांगितलेली स्वास्थ्यपूर्ण दिनचर्या, व्यायाम, मनाचे आरोग्य राखण्यासाठी प्राणायाम, ध्यानधारणा यांचा अवलंब केल्यास प्रत्येकाला स्वास्थ्य राखणे काही प्रमाणात तरी निश्चितच शक्य होईल. 'सर्वेपि सुखिनः सन्तु, सर्वे सन्तु निरामया' या वैश्विक प्रार्थनेचे स्मरण करून या कोरोनाच्या संकटावर मात करण्यासाठी आपल्या सर्वांना बळ मिळो हीच कामना!

उपसंपादकीय

आधुनिक रसद!

– डॉ. सौ. विनया दीक्षित

आरोग्य सैनिक करोनाच्या युद्धभूमीवर प्राणपणाने लढत आहेतच, युद्ध थांबत नाहियेच पण आटोक्यात येण्यासाठी शर्थीचे प्रयत्न व ताज्या दमाची नवी कुमकही लागत आहे. नुकतेच परीक्षा दिलेले वैद्यकीय पदवीधरही शासनाच्या कामात भरती करीत आहेत.

तरीही डॉक्टर्स, नर्सेस, सेवक वर्ग यांना या युद्धात रुग्णासाठी उपयोगी व स्वसंरक्षणार्थ अशी शस्त्रास्त्रे व कवच–कुंडले मात्र वेगवेगळ्या स्वरुपात प्रचंड प्रमाणात व तितकीच प्रभावी अशी लागत आहेत. या करीता अभिमानाने सांगता येईल की भारताच्या कोविड १९ च्या या लढाईत पुण्याच्या DIAT and DRDO (Defence Institute of Advanced Technology) and (Department of Defence Research and Development) या दोनही संस्थांनी देशातील इतर सरकारी संशोधन क्षेत्राबरोबर अतिशय मोलाची कामगिरी करत अवघ्या दोन–तीन महिन्यांच्या अवधीत अनेक नावीन्यपूर्ण संशोधने पूर्ण करुन आरोग्य क्षेत्राला या महामारीच्या युद्धात लढाईला पूरक अशी उत्पादने प्रचंड प्रमाणात उपलब्ध होतील व परवडतील अशी सुरुवातही केली आहे.

या संशोधनातील सर्व उत्पादनांचे पेटंटही या संस्थांनी मिळविले आहे. तसेच ही उत्पादने विषाणू नष्ट करणे, रोखणे या करीता अतिशय प्रभावी असल्याने आंतरराष्ट्रीय मानांकनही त्यांनी पूर्ण केले आहे.

सर्वप्रथम अनन्या या नावाने नॅनो तंत्राचा वापर केलेला Disinfectant Spray for all surfaces - A Universal Coating Material to Combat Microbial Infections याचा उल्लेख करावा लागेल. यानंतर पूर्ण अंगाचे संरक्षण करणारा Body Suit जो धुवून पुन्हा पुन्हा वापरु शकतो, ASTM International Standards याने उत्तीर्ण केले आहेत व त्याचे मुंबईत रोजचे दहा हजार असे उत्पादनही सुरु झाले आहे. याच बरोबर N 99 हे पाच थरांचे चेहऱ्यावर लावायचे मास्क ज्यात दोन थर हे नॅनो मेशचे आधुनिक पद्धतीने बनवलेले आहेत. याचेही संशोधन पूर्ण व निर्माण मोठ्या प्रमाणात सुरु झाले आहे. हातांच्या स्वच्छतेसाठी आवश्यक Hand Sanitizer चे नवे संघटन व दिवसाला वीस ते तीस हजार लिटरचे उत्पादन सुरु आहे तेही २००–४०० मिलीच्या बाटल्यांच्या स्वरुपात सर्व करांसहित केवळ १२० रुपये प्रति लिटर इतक्या कमी किंमतीत!

याच बरोबर अतुल्य हा Microwave Sterilizer कोरोना विषाणूचा नाश करण्यास सक्षम असा बनवला आहे. निर्जंतुकीकरणासाठी केवळ ३०–६० सेकंदाचा वेळ या उपकरणास लागतो व याचे वजन केवळ ३ किलो आहे. धातू नसलेल्या कुठल्याही वस्तूचे निर्जंतुकीकरण याने होते. तसेच एकाच वेळी जास्त रुग्णांसाठी वापरता येणारे Ventilaters, Medical Oxygen Plants या सर्व क्षेत्रात बहुमूल्य योगदान देत एक मजबूत व आधुनिक पाठिंबा या सर्व आरोग्य सैनिकांनी निर्माण केला आहे.

यामध्ये दिल्ली, ग्वाल्हेर, बंगलुरु, कोलकाता अशा देशभरातील इतर DRDO च्या शाखाही पुण्या बरोबर होत्याच.

कोरोनाच्या तपासणीसाठी लागणाऱ्या ECONO - WISK for Safe Swab Collection या छोट्या नावीन्यपूर्ण तंत्रापासून विविध उंचीचे संशोधन पूर्ण करुन अवघ्या दोन महिन्यात त्याचे परीक्षण, पडताळणी पार करुन, यशस्वी व मोठ्या प्रमाणात उत्पादन तयार करणे व उपलब्ध करुन देणे हे खरोखरच प्रशंसनीय कार्य आहे. हीच राष्ट्राप्रतीची खरी जबाबदारी आहे. अर्थात अनेक उद्योग संस्थांनी पुढे येऊन या उत्पादनांच्या निर्माणाला मोठा हात दिला आहे. पण संशोधकांचे तेज व जिद्द हे नक्कीच गौरवास्पद आहे. ही आधुनिक रसद आरोग्य सैनिकांना हे विषाणू युद्ध आटोक्यात आणण्यासाठी पुरेशी होवो हीच श्री धन्वंतरी चरणी प्रार्थना!