Eminent Greco-Arab legends and their concepts of preventive and social medicine

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Abstract
In the present paper, emphasis is given on the historical perspective of contribution of Greco-Arab legends within the genesis and understanding of preventive aspect of drugs. Henry Seigerist, the medical historian has stated that each culture had developed a system of medications. Unani (Greek) system of medications is connected to great Greek civilization. Hygiea was worshipped as goddess of health and Panacea as goddess of medicine. Thus, the dichotomy between curative and medicine begins early and remains today. Asclepius, the father of Hygiea and Panacea remains cherished in medical circles. Hippocrates (Buqrat), also called “father of medicine” was first who contributed a lot in the field of preventive and social medicine and regarded as true epidemiologist. Later on, many eminent Arab physicians, for example, Jalinoos (Galain), Zakariya Razi (Rhazes) and Ibn Sina’s (Avicenna), they all propounded and anticipated independently in the field of unani preventive and social medicine both in theory and practical.

Keywords: Asbabe Sitta Zarooriya, Jalinoos, Al Hawi, AlQanoonfi-Tib, Buqrat, Zakariya Razi

Introduction
The origins of Unani medicine are found within the doctrines of the ancient Greek physicians Hippocrates and Galen (131-210AD) on which Arab & Persian physicians like Rhazes (850-925AD) constructed an imposing edifice. As a field, it had been later developed and refined through systematic experiment by the Arabs, most prominently by Muslim scholar-physician Avicenna. The golden period of Unani medicine is considered from 800 to 1300 AD. The objective of the study was to find out the work of eminent Greco-Arab personalities in the field of Preventive and community medicine. Thus, extensive literary survey of the Unani classical texts was carried out to suffice the objective. In historical perspective of our subject “preventive & social medicine” we come to know that they had developed keen insights and laid foundation of epidemiology, environment, sanitation and personal hygiene etc. Hippocrates, considered as “father of medicine” by the followers of various systems of medicine around the globe. His book on “Air, Water & Places” considered as a treatise on social & preventive medicine. Also mentioned as first true epidemiologist, gave the important concepts of “Asbabe Sitta Zarooriya” and “Qewwat e Mudaafiya”. Jalinoos (Galain) had proposed the Concept of Tripod Factors (i.e. 3 sorts of factors are liable for occurrence of diseases) viz. predisposing Factors, Exciting Factors and Environmental Factors. The Preventive Theory of WHO is usually seen as a modification of this i.e. intervention at any of those levels will prevent the disease process. Zakariya Razi (Rhazes) was legendary in the medical world as a “Pioneer of medicine and Epidemiologist” who gave the Putrefaction Theory. His book Treatise on Smallpox and Measles also covers descriptive epidemiology and communicable disease epidemiology. Al Hawi has one whole volume dedicated to the various preventive measures. In Kitab Al Mansoori also, had devoted quite large part to preservation of health. The medical fraternity within the world shall remain indebted for Ibn Sina’s (Avicenna) AlQanoonfi-Tib who gave concept of ‘multiple factors’ explanation for the disease and idea of quarantine. He proposed the Trilogy of Preservation of Health.

Hippocrates (Buqrat) (460-370 BC)
- Father of all systems of medicine

✓ Hippocrates established a line of demarcation between therapeutic and preventive medicine.
- He presented environment as one of the cause of a disease and an idea about seasonal
Hippocrates – as an epidemiologist

2nd important work of Hippocrates is said with epidemic and epidemic diseases.
- Introduced the terms ‘Epidemic’, ‘Endemic’ and clearly distinguished between them.
  He studied such things as climate, water, clothing, diet, habit of eating, and therefore the effects that they had in producing disease. Hippocratic concept of health and disease stressed the connection between man and environment.
- Studied the consequences of seasons & of hot and cold winds.
- Sources and effects of various sorts of water.
- He studied diseases in reference to time, season, place, environmental conditions and disease control [3].

Hippocrates was the 1st person who describes
- Humours – Every person supposed to have unique humoural constitution which represent healthy state.
- Medicatrix naturae (Quwate mudabbrah) / power of self-preservation / adjustment maintain correct humeral balance in the body.
- Correct diet is one of the important things which help power of self-preservation [3].

Concept of physic (Tabiat) / Immunity (Quwat e Mudafiat)
- The function of physic is preservation of health in state of health and defences against disease in the state of disease. Physic is responsible for maintenance of health.
- Human body is designed by nature to be self-sustaining and self- healing.
- Illness and disease are the result of body’s fight against the disease process.
- The role of the physician is that of a servant and facilitator of nature.
  The purpose of medical intervention should be to strengthen the vitality through preventive measures [6].

Eminent Quotations about health & Preventive & Social medicine by Hippocrates
- Don’t eat so much that eateries might eat you.
- Bodily and psychic movement and rest effect body in case of scarcity and abundance. So optimization is must for health.
- Duration of Sleep and wakefulness should also be optimum. Imbalance causes digestive disturbances. Metabolism is better in sleep. Wakefulness causes fatigue which is removed through sleep.
- Evacuation and retention is another important unani concept of Preventive & social medicine. In materialistic temperamental defects abnormal retention and evacuation takes place. In the state of health benign material retain in the body while defective matter evacuated from body [6].
- Health is protected by not filling of stomach with food & drinks and avoidance of lethargy
- I assured health of those who manages emesis in the beginning and end of month
- Cause of disease is feeding like an animal while cause of health is feeding like birds
- Eat to live and don’t live to eat
- Respect health before it is lost

Books by Hippocrates
- Kitabul ahwia wal maa wal buldaan – air, water and places - Hippocrates,
- Kitabul waba – epidemics – Hippocrates

Note: Ibn Abi Usaiba coded 12 important books of Hippocrates used in teaching related with preventive & social medicine
- Kitabul fusoool (Seasons)- Hippocrates
- Kitabul grza (Nutrition)- Hippocrates
- Corpus hippocraticum - Most familiar and important book of Hippocrates containing 72 volumes. The book was compiled in a school of Alexandria of Egypt.

Galen (Jaalinoos) 129-200 AD
Galen contributed in the field of Unani preventive & social medicine as follows:
- Tripod Factors.
  3 types of factors are responsible for occurrence of diseases:
  - Predisposing Factors
  - Exciting Factors
  - Environmental Factors
  The Preventive Theory of WHO can be seen as a modification of this i.e. intervention at any of these levels will prevent the disease process.

Sanitation and Public Health.
- He also served as a Public Health Administrator in Rome in his later years.
- An important aspect of Preventive Medicine on which he emphasized was Sanitation.
- He made special rules and regulation of sanitation for the general public [5].

Rhzaz (Zakariya Razi) – (865-925 AD)
Rhzaz contributed in the field of Unani preventive & social medicine as follows:
- The Putrefaction Theory.
  - He hung pieces of meat at different quarters of the city and selected that site for hospital where the meat had decayed the least.
  - He showed the bacteriologic putrefaction of meat by the microbes present in the air.
  - He proved the environmental role that contaminated air plays in the spread of infection.

As an Epidemiologist
- Small pox & Measles (Kitab al Judri wal Hasba) also covers descriptive epidemiology and infectious disease epidemiology.
- Also describes all the basic tools of a modern epidemiologist.
- 1st chapter - agent, host, environment relationship.
- 2nd chapter - seasonal and personal distribution of the
disease according to temperament & body shape.

- As a ‘Pioneer of Preventive Medicine’
- Described the preventive measures for small pox and measles.
- Advised venesection for adults and cupping for all young patients.
- Discovered the method of variation to provide acquired immunity to healthy persons.

Books by Rhazes

- Kitabul Mansoori fittib – Rhazes (Zakaria Raazi)
- 10 Treatises
  - 3rd treatise on food & nutrition,
  - 4th treatise on preventive & social medicine, - seven essential factors (asbabe sitta zarooriah), Non-essential factors (asbabe ghair zarooriah), Child & senile care, Neonatal & mother care,
  - 5th treatise on cosmetology, hair care,
  - 6th treatise on traveler’s guide, season preventive measure, preventive measures of eye, nose and ear in adverse geographical condition

- Kitab Al Hawi (Liber continence) – Rhazes (Zakaria Raazi)
  - Volume III – nose, ear, mouth & throat hygiene
  - Volume XVII – small pox & measles (judri wa hasba) – 1st introduce inoculation and isolation
  - Al Hawi has one whole volume dedicated to the various preventive measures.

- In Kitab Al Mansoori also, has devoted quite a large part to preservation of health.

Avicenna (Ibne Sina) (980-1037 AD)
The concept of Unani preventive & social medicine as described in the book is as follows:

[A] Health depends on six essential factors of life/health, which are as follows:
1. Air
2. Water & drinks
3. Bodily movement & rest
4. Psychic movement & rest
5. Retention & evacuation
6. Sleep & wakefulness

Air which remain optimum and clean, moreover external bodies which have adverse effects on temperament of spirit (pneuma) if not combined with it then such air preserve health.

All the above factors are essential for life or one can say life is impossible without them. All these factors are basis of preventive and social medicine.

[B] Other factors are non-essential for life but play an important role in preservation of health.

These factors are as follows:
1. Bath
2. Physical exercise
3. Massage
4. Venesection
5. Fatigue
6. Yawning & Pedunculation
7. Clothing / Garments etc.

Art of maintaining of health is concerned with 2 things
- Prevention of putrefactive breakdowns and
- Safeguarding of innate moisture from very rapid termination. (Part III of canon of medicine)

Essential consideration in the art of preserving of health consists in maintaining equilibrium between all these various contaminant factors.

There are seven matters concerning with special care

- Equilibrium of temperament
- Selection of article of food and drinks
- Evacuation of effete matters
- Safeguarding of composite
- Maintaining of purity of air respired
- Guarding against extraneous contingencies
- Moderation in regard with movement of body, motion of mind including sleep and wakefulness

Few important concepts of Avicenna in regard with Unani preventive & social medicine

- He has assured of the importance of environmental factors in causation of disease and also in their prevention.
- He suggested the ‘multiple factor’ cause of the disease.
- He said infections can be prevented by avoiding direct contact with the person - thus gave the idea of quarantine.
- He had directed special attention to specific groups who were at high risk of acquiring disease.
- He suggested many procedures of evacuation (istafragh) to keep the body in healthy state e.g. diarrhoea, vomiting, venesection and cupping.
- He describes various types, quality and illnesses of water.
- He mentioned air spoilage and its effects.
- He note down the design and location of houses.

Precise concept of Avicenna about preservation of Health

“in the practice of health preservation it is necessary that a proper balanced between the various essential, already described anywhere in this book should be ensured. Of these need special mention

(a) Maintenance of balanced temperament under the varying condition of life;
(b) Consumption of suitable food and drink;
(c) Proper elimination of waste product;
(d) Adequate care of organ;
(e) Purity of inhaled air;
(f) Healthy environment and;
(g) Moderation in physical and mental activity including sleep and wakefulness.”

Books by Avicenna

- Al-agzia wal adwia (food & drugs) – Avicenna
- Hifzatussehat (health preservation) - Avicenna
- Al-fasad ya fil-urooq al-mafsoodah (vesensection) – Avicenna
- Wasiat hifze sehat (Preservation of Health in poetry) – Avicenna
- Usul fittib (Principles of Medicine) – Avicenna
- Al-qanoon fi-tib (Canon of Medicine) – Avicenna (Bu Ali Sina / Ibn Sina):
  - 5 parts –
    1st part – on Preventive and social medicine
Conclusion
In the present study, we come to understand that they were far ahead of their times and proved themselves as torch-bearers for our knowledge of preventive and social medicine in today’s scenario. By far the greatest physician in Greek medicine was Hippocrates (Buqrat) called the Father of medicine. He challenged the tradition of magic in medicine & gave numerous new theories regarding diseases and their causes. He differentiated between curative and preventive medicine. Galen (Jalinoos) was far ahead of his time. He gave the concept of preventive medicine prior to curative medicine. Zakariya Razi’s tremendous work on small pox and measles is remembered till today. His book Al-hawi (Liber continence) may be considered a masterpiece and a reference to us. Another remarkable personality was Avicenna (Ibne Sina). His encyclopaedia of medicine in 21 volumes is referred to as Canon of Medicine (Alqanoon fit-Tib) leaves marks on medical theory and practical. The Unani legends were cognizant of epidemiology, environment, sanitation and personal hygiene etc. Thus, in historical perspective of Unani “preventive & social medicine” we come to know that how much they had developed keen insights and laid its foundation, thereby, paved a way forward in this field.

References
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