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Review Article

Predictors of Advocating Safe Health Population when Handling Sars-Cov-2 Morbidities and Mortality to Enable Safe Disposal and Mediate Efficient Community Live Hoods

Maurice Silali*

School of Medicine Maseno University, Kenya

***Corresponding Author:** Maurice Silali, School of Medicine Maseno University, Kenya.

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Abstract

Predictors to mediate Safe Health Population during active SARS-CoV-2, (COVID, 19), a Public Health, not Curative Challenge as perceived by majority globally and regionally are predetermined by comprehensive and holistic uptake of Non-Pharmaceutical Interventions (NPIs) in increasing COVID 19 Red zones. Utilization of fermented green tea 100°C steam COVID19 Inhalation, and Arterial embalmment enable health population to safe disposal and advocate for Cadavers as distinct education tools in medicine. Population at high health risks are mainly COVID 19 patients and persons above 56 years who needs regular inhalation of steam fermented in green tea leaves to release catechins and theaflavins that neutralize corona virus in the respiratory system. Advocacy for quality uptake of NPIs; wearing masks in public, 1.5 meters Physical distance in Social environments of COVID 19, regular soap Hand Sanitation in running water and compulsory embalmment of SARS-CoV-2 dead, 48hrs of death to enable safe Infection Prevention Control. SARS-CoV-2 clinical presentations include: fever, sore throat, cough and dyspnea due to aseptic shock attributed with marked low blood pressure thus asphyxia. SARS-CoV-2 incubation period is14 days. Patient's virulence is elucidated by individual body immunity and specific underlying conditions. Deaths of SARS-CoV-2 pathogens/microbes takes 48hrs in deceased to die, while in HIV/AIDS 16 days. Affected population by COVID 19 may achieve stronger immunity by acquiring Herd immunity, vital against variety of SARS-CoV-2 strains, or by anti-toxoid, or Vaccine injections which may be dearly expensive with short lasting passive immunities. Clinical case study explored roles of Health Belief theories and Health Behavior change model on fermented green tea at 100°C steam COVID 19 inhalation, and, Arterial embalmment by machines not gravity as cradle empowerment to enable population health have sustainable informed knowledge, Change attitude on COVID 19, and enable them led quality Public health practices attributed with quality infection prevention control measures against SARS-CoV-2, using quality case analysis of Standard Operating Procedures. Thus need enabled Health Belief theories and model to solve attributed problems with limited empowerments among Population health on safe community live hoods through informed collective behavior change that may enable them to collectively take responsibility of their own health by practicing informed quality infection Prevention Control measures and boost immunity via Immunization and water vitamins intake concepts, as enabled by Government intersectoral collaborations of the day and synergistic partnership with Donors. Fermented green tea 100c° steam COVID 19 Inhalation and Arterial machinery embalmment aims to reduce SARS-CoV-2 morbidities and provide Primary prevention better than Cure for sustainable societies without necessary criminalizing a Public health challenge into social crimes scenes.

Keywords: Predictors; Herd Immunity; 100°C Steam COVID19; Safe Population Health; COVID 19 Disease; Catechins; Theaflavins

Introduction and Background of Clinical Case Analysis

Introduction and Background

The novel SARS-CoV-2/coronavirus disease (COVID-19) is a pandemic public health disease discovered in Wuhan, China in December 2019 [15.16]. Most observational and epidemiological studies opine that COVID-19, affects mostly older cohorts of 56 years and above, with other underlying diseases like hypertension, diabetes, obesity, chronic lung diseases. Further clinical epidemio-

logic studies attributes low female susceptibility to COVID 19 with marked reduction levels in cytokine production, higher numbers macrophage and neutrophil activity for immune response than male counterparts who have high level of cytokines production and few numbers of neutrophils and macrophages [2,3,7,20]. Females gender have also low expressions of angiotensin-converting enzyme 2 (ACE2) in their kidneys than males gender. The clinical presentations of symptomatic COVID 19 patients are fever, dyspnea, cough, fatigue, and sore throat. Gastrointestinal symptoms are nausea, vomiting, diarrhea, and abdominal pains [4,17]. In advanced cases, patients may rapidly develop respiratory failure with acute respiratory distress syndrome, due to aseptic shock associated with drop in blood pressures and even progress to death [3]. Predictors of Population health safety when handling COVID, 19 diseases and Deaths are entails basically involves synergistic partnerships to enable sustainable health prevention, control and promotion approaches that advocates for quality utilization of PPEs, physical distance, machinery arterially embalmment and disinfection of COVID 19 patient immediately after death, to enable safe disposal and cadaver's utilization as distinct educational tools [5,7,17].

Majority of population health like the global health, have limited knowledge on what steam COVID 19, in fermented green tea leaves to provide catechins and theaflavins [1,31] and embalmment fluid contain and how efficacy of each specific ingredient does in dead tissues and organs, hence when SARS-CoV-2 patient succumbs to death, various medical myths may develop instantly, hence last office procedures and embalmment are abandoned and the infectious death is double bagged in leak proof bags and transported in the community for disposal under a tight security without synergistic participation of the next of kins, thus ignoring the community holistic burial culture, customs and religious tradition rites [3,17,30]. Transportation of non-embalmed corpse during pandemic increase both environmental health hazards and health risks to Population health during disposal, specifically if bodies were being allowed to viewed or kissed by the next of kins. Service providers and next of kins of the deceased, form primary audience in health promotion and disease infection prevention control from SARS-CoV-2 death, by using viable fresh concentration of embalmment fluid which contain: disinfectant, fixative, preservative, humectant, buffer, salts, surfactant and anticoagulants predictors, COVID 19 pathogens takes 48hrs in deceased to die while HIV/ AIDS 16 days [11,13,17].

Specific objectives of the case study elucidated how Health Belief theory and behavior change model function on health promotion principles on embalmment and 100°C Steam COVID 19 knowledge, attitude and health practices (KAP) influence safety of population health when handling SARS-CoV-2 diseases and corpse to enable cadaver's preparation from COVID 19 [17,20], elucidated level of NPIs uptake among population health as opined in the global health protocol [27]. Despite the global establishment of safe standards of disposal of COVID 19 deaths using health predictors of safe infection prevention control and health promotion interventions to enable informed health behavior change on SARS-CoV-2 disease, the Sub Saharan Africa still lacks quality public health approaches to enable, advocate and mediate for holistic and comprehensive uptake for both primary prevention and machinery arterial embalmment. Prolonged limited application of primary prevention interventions are attributed with low health informed behavior change on COVID 19 disease management, thus regional and local live hoods have constantly continued remained in the vicious cycle on poverty since the emergence of COVID 19 pandemic [17]. Thus need to enable population to achieve Herd immunity beside practicing infection prevention control measure that are accessible and reliable alternative medicine of simple regular steaming at 100% fermented green tea leaves at regular interval to reduce health risk and virulence among the endangered cohorts of 56 years and above.

Regular 100oC fermented green tea leaves steam COVID 19 inhalations for SARS-CoV-2 patients and persons of 56 years and above

Currently there is no safe and effective antivirals to treat COVID 19 infection. Thus, mediation of Non-Pharmaceutical Interventions (NPIs), such as wearing masks in public, social distancing and regular hand washing to promote community live hoods. SARS-CoV-2 is an RNA virus coated with a capsid and a peri-capsid crossed by glycoprotein molecules. The external protein structure attacks human cells is a potential target to therapeutic interventions against virus replication in airways. Regular inhalation of 100°C fermented Green tea Leaves 100°C. Steam cycles are considered to be useful in damaging the capsid of SARS-CoV-2 envelope and prevent infection

in human body Thus European Pharmacopoeia VI edition has recommended steam inhalations as a procedure to treat respiratory diseases [1,23,31].

Regular COVID 19 inhalation steaming in fermentable green/strong tea at 100°C demonstrated to be more effective and efficiency in reducing the high rate of morbidities compared to regular quarantine and isolation policy measures that may delay early achievement of herd immunity. Anatomically SARS-CoV-2 microbes are located in the posterior noise and are easily killed by hot temperatures of (60°C - 70°C) [18]. Fermented green tea leaves/green and fresh from the farm contain catechins and theaflavins the enable the opening of alveoli of the infected lung. Desk information opined that drinking warm drinks dislodges SARS-CoV-2 accumulation around oral pharynx to be swallowed direct into stomach thus may be killed by stomach HCL acid before inhaled into bronchi of lung. Population health eating ginger, garlic, watermelon oranges and lemons boost their body immunity to reduce potential risk of developing COVID 19 disease (Appendix 2 and 3).

High temperature cause irreversible denaturation of proteins and loss of SARS CoV and SARS CoV-2 infectivity after boiling in non-fermentable strong tea at 100°C for 15 and 30 minutes in liquid environments. Steaming aimed at damaging SARS-CoV-2 capsid through steam inhalation cycles similar to European Pharmacy VI edition steam inhalations used as a procedure to treat of respiratory diseases [23,31].

Designing population health safety interventions on sars-cov-2 disease in western Kenya

Advocacy for health education to population health to enable synergistic public health promotion

Health promotion is a way of enabling COVID 19 health population to increase control over and to improve their own health through personal and social hygiene, uptake of proper NPIs [25], mediate with Political will in facilities and institutional to provide accessible and reliable resources as well as physical capacities [26], to allow population health to take responsibility up of their own health by utilizing the 'Health belief theory on quality embalmment and 100°C black tea steaming as health promotion principles that need synergistic public participation in holistic and equitable distribution of COVID 19 funds, and good will administrations from the inter sectorial collaborators and human resources developments [17]. Despite constant media empowerment on knowledge, attitude and health belief practical model on (KAP) on safety of the population health it still remained high due to limited application of steam inhalation and machinery arterial embalming for quality disinfection [23,24].

Limited utilization of fermented green tea to release catechins and theaflavins during steam inhalation to mediate gradual healing [31] and arterial embalmment as basic predictors of the safe Population health to enable safe disposal and cadavers preparations as distinct tools for dissection for medical education, from SARS-CoV-2 dead still remain un achievable both globally and regionally [6]; due to attributed existing low advocacies, and limited mediations from MOH to enable user friendly health protocols that mediate well-functioning systems for handling COVID 19 cases.

Thus, need to utilize safe health predictors that advocate for safe health population through sustainable machinery embalmment and holistic uptake of fermented green tea inhalation concepts for efficiency infection prevention control and the alternative medicine for the pandemic.

Approaches to mediate and advocate for fermented green tea/flavonoids steam covid 19 inhalation and machinery arterial embalmment to enable safe health population in sars-cov-2

To enable 100oC fermented green tea steam COVID 19 Inhalation in managing early clinical stages of SARS-CoV-2

Tea (Camellia sinensis, contain over 300 compounds but most common ones are alkaloids/flavonoid and tannins which are produced depending on how tea leaves are processed after harvested in their fresh and green [1,31].

SARS-CoV-2 is an RNA virus coated with a capsid and a pericapsid crossed by glycoprotein molecules. The external protein structure attacks human cells is a potential target to therapeutic interventions against virus replication in airways. 100°C Steam inhalation cycles of flavonoids contain catechins and theaflavins which are considered to be useful in damaging the capsid of SARS-CoV-2 envelope and prevent infection in human body [31]. Thus, European Pharmacy VI edition has recommended steam inhalations as a procedure to treat respiratory diseases [23].

High temperature cause irreversible denaturation of proteins and loss of SARS CoV and SARS CoV-2 infectivity after boiling in

fermented green strong tea at 100°C for 15 and 30 min in liquid environments. Steaming aimed at damaging SARS-CoV-2 capsid (bactericidal), through steam inhalation cycles similar to European Pharmacy VI edition steam inhalations used as a procedure to treat of respiratory diseases while fermentable green tea leaves in steam aims at producing catechin to supplements opening of the alveoli of infected lung and theaflavin kills corona virus, thus promoting good prognosis through alternative medicine (Appendix 3) [23,31]. Tea contain more caffeine than coffee but is soft since tea has tannin that easily converted to theine - better taste and mental performance stimulant of CNS, and heartbeats [1].

Utilizing of embalmment knowledge, attitude and public health practice theory and health belief model for safe health population

In 2014 Mortuary and forensic sciences encountered Ebola epidemic in west and central Africa, whose virulence was severe compared to lower virulence being witnessed in SARS-CoV-2 cases [15,16], these have led to complete transformation of health behavior change and economic depreciation among the population health globally regionally, and locally in Kenya, with limited COVID 19 protections of its next of kins, Population and environmental health from exposure to the deadly pathogens [17,25]. Thus need to enable relative mediation and advocacy of public health prevention control and health promotion by MOH to empower the holistic utilization of freshly prepared embalmment fluid which consist of: methyl alcohol, phenol crystal, formaldehyde 37%, sodium citrate, sodium chloride, glycerol, and sodium laurysulphate a surfactant which are introduced into anatomic structures by machinery embalming [17], Sodium hypo chlorite solution that is microbial disinfectant applied prior topically as determined by prevailing case analysis [13].

Global health revolutionized infection control and prevention protocols to prohibit unsafe transportation of infectious deaths [9] and disposal by burial or cremation or cadaver dissection [6,17]. However, without social advocacy, mobilization and community empowerment from qualified professional embalmers on quality embalmment for safe infection prevention control may continue to pose a global challenge and regionally specifically in Africa and Sub Saharan Africa, thus interfering with integration with diversities of African cultural/customs and religious traditions that provide dignified disposal to deceased family members [27,30]. Some myths have persisted concerning potential environmental contamination associated with burial of SARS-CoV-2 cases as directed by global health authorities [12,14], without recognizing values of culture and religion tradition attached to specific to the living dead. Thus haunt family members still living typical case witnessed in Bungoma, county in western Kenya which prompted to planned calm night exhumation by next of kin, since the living dead was complaining of being strangulated by ties and being pressed shoes while walking, tie and shoes were put on dead by health providers without involving the next of kin and considering values of culture/custom of the dead clan and community Disposal of COVID 19 dead were strictly contacted by Public health team, that community nicknamed as "men in white sleeved gowns and boot at grave yard" (Appendix 1), the public health team procedure created psychosocial stigma in community health resulting to long time to heal form the psychological trauma [17].

Thus, timely need for a case study to assess health service providers Knowledge, Attitude and health Practices on roles of arterial embalmment as predictor for population health safety when handling COVID 19 corpse for disposal or cadavers as distinct education tools in medical schools [17].

Mode and sources to susceptibility of health population to acquire infection from sars-cov-2 deaths and associated limited behavior change to disease

Main sources of infection after death of any human being include body fluids such as blood, saliva ascetic fluids, pleura fluids, and gestural intestinal fluid, waste products such as fecal material [3,17] and urine, aerosol of infection material released through the mouth and nose, microbes on the skin surface such COVID 19 or Ebola may be acquired by direct contact that need to contained immediately after death [11]. Transmission of infective pathogens of COVID 19 to susceptible host (community) requires 3 elements to occur: one the dead or infective subjects which is a reservoir for the infective agent, susceptible host, to receive the microbes (community households) and the mode of transmission may be contact or airborne (inhalation) [11,29], therefore, quality machinery embalmment [1,17,19], prevent and control infection transmission holistically to enable normal burial and cadaver preparation as distinct educational tools for medical students [5,12,17,20].

Sources of SARS-CoV-2 infection after death are determined by: microbial load of the source of infection from the dead or contaminated objects, susceptibility of the host (community households)

at portal entry of infectious agent, and mode of transmission: droplet inhalation, contact via contaminated hands for COVID 19 virus placed into mouth, nose or eyes [17,25], autopsy contaminated mortuary instruments or equipment, utilization of defective NPIs that may transmit infection to health-care providers [25], Clothing, uniform soiled with infective microbes, Blood fluids split into the eyes, or mouth or another mucosal membranes during operation. Breakage into skin to cause a direct contact of microbes into body [29]. However main route of entry of infectious pathogens remains contact and droplets inhalation (airborne). Thus, need to assess level of embalmment as on safety predictors for population health when handling SARS-CoV-2 dead.

Health risks associated with delayed covid 19 steam inhalation among sars-cov-2 patients

Since currently there is no safe and effective antivirals to treat COVID 19 infection. SARS-CoV-2 is an RNA virus coated with a capsid and a peri-capsid crossed by glycoprotein molecules, and are anatomically accumulated posterior cells of the nose, thus easily denatured by steaming with boiling in fermented/green tea leave from the farm contain catechins and theaflavins flavonoids which are free radical scavengers, that enables easy opening of the alveoli cells in the infected lung and kill corona, virus respectively to improve prognosis as the body develop immunity against SARS-CoV-2 [17,31]. High temperature cause irreversible denaturation of proteins and loss of SARS CoV and infectivity after heating black tea at 100°C for 15 and 30 minutes in liquid environments. Steaming aimed at reducing patient from developing into advance of SARS-CoV-2 which include: acute respiratory distress syndrome, due to aseptic shock associated with drop in blood pressures and even progress to asphyxia death [3,27].

Health risks associated with direct contact transmission of infectious disease before arterial embalmment

Health risk is the chance or likelihood that something may harm or otherwise affect your health, it does not mean that definitely will happen [9,25]. Direct contact transmission of COVID 19 may be transmitted by direct inhalation, droplets or indirect contacts with the infective fomites [29]. Direct contacts transmission involves direct transfer of potentially infectious pathogens from the infective agent to susceptible host/community household through, direct skin to skin contact within 6ft physical distance, inhalation of air due to incorrect wearing face masks in red zones or handling fomites of COVID 19 confirmed patient without gloves or sanitizing hands [17,22].

Indirect contact or cross infection involves transfer infected material by infective agent, carrier to a susceptible individual via physical contact/touch with contaminated surfaces equipment or items such as door, mortuary trolleys with gloves, ATM keyboards or equipment. Droplet transmission - transfer of droplet contain infective agent to susceptible individual during autopsy procedures [6], such Cadaver dissection or embalmment, droplets comes direct contact with mucosal surface of the eyes nose or mouth of susceptible individual [28,30]. Distance covered by potential pathogens is determined by velocity propelled from infective source, Density of respiratory secretions, environmental factors (temperature and humidity) [15,16] and ability of microbes to remain infectious over specific distance [25,29]. For COVID 19 distance of 3 feet should be applied, thus wearing face mask to get protection from droplet exposure is vital during embalmment and autopsy procedures. Mortuary service providers should wear N95 face mask while within 6 to 10 feet of dead bodies of suspected high virulence microbes. Observation of particles dynamics in droplet infection sizes vary from 30 micrometers to 10^{-6} meters or greater may remain in air for many hours. Thus, timely need to describe the health risk associated with direct or indirect contact with the COVID 19 pathogens [15,16].

Theory and health belief model on safe of health population on informed behavior change on sars-cov-2 disposals as distinct medical tools

Health belief theories focus on how individuals will gradually change their informed behaviors on disposal of COVID 19 corpse or enable medical institutions to prepare cadavers has distinct educational tools for dissection in western Kenya [14,24] (Appendix 4). Health belief theory advocate and mediates to provided foundation for safe infection prevention control of COVID 19 related cases, predicts and limit transmission of SARS-CoV-2 health risk and increase informed behavioral change to population health by enabling health education and social mobilization for quality Health Promotion [26]. Informed decision making originated from population health themselves via Health education that influence improved literacy grades on roles of arterial embalmment and empowerment to sustain safe behavior among population health when handling COVID 19 human remains. Although each theory

is built on different assumptions of integrated health approaches, they all state that COVID 19 disease behavioral changes may occur by altering potentials of the health risk-producing situations and social relationships, risk perceptions, attitudes, self-efficacy beliefs, intentions and good outcome expectations from arterial embalming [14,24].

Expectations on safety of population health after steam inhalation or handling sars-cov-2 dead for disposal

The clinical case study expected that most infectious pathogens specifically COVID 19, would be killed (bactericidal, bacteriostatic) contained in fermented green tea will enable alveoli cells to open readily and kill corona virus during 100°C COVID 19 steam inhalation [1,31] and arterial embalmment, enabled from prevailing case analysis by professional embalmer [17,19]. Arterial Embalmment act as preservatives, sanitizes and disinfectant agents, thus enables long term safety of population health on exposure, allow culture and religious traditions to be accorded with dignity based diversity of the communities cultural/religion rites [17,27]. Culture advocating for cremation or burial were implemented based on the context up to the letter [21,24].

Expectation of case study on changed informed health behaviors

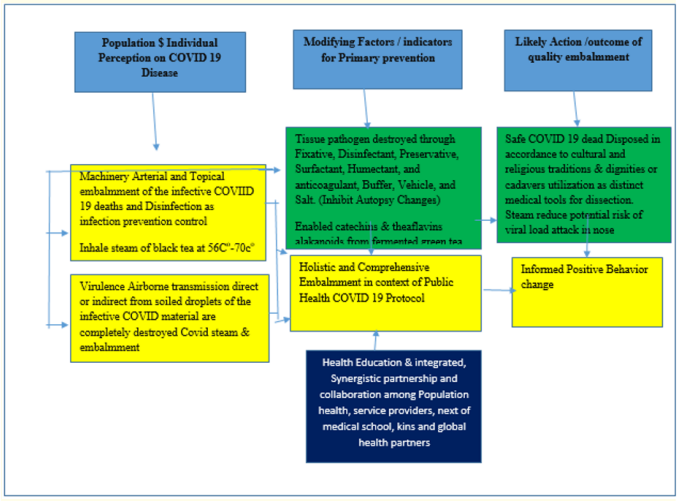
Keen observation survey and need assessments made though Key informant interviews from lectures attended by post graduate students practicing COVID 19 steam inhalation in Maseno University, recorded limited clinical presentation of on and off SARS-CoV-2 disease during entire period of learning while steaming in boiling fermented green tea before and after lectures to release catechins and theaflavin as an alternative medicine for respiratory disease [1,31].

Machinery embalmment demonstration and clinical surveys in Trans Nzioa and Bungoma Counties sampled demographic mortalities attributed to SARS-CoV-2 disease. Case by case analysis opined that SARS-CoV-2 disease, affects mostly the older cohorts of 56 years and above, with other underlying diseases such hypertension, diabetes, obesity, chronic lung diseases [17]. Thus, needed frequent steam inhalation and constant application of NPIs. The clinical studies gender also attributes decreased female susceptibility to COVID 19 disease with marked reduction levels in cytokine production, higher numbers macrophage and neutrophil activity for immune response than their male counterparts who have high level of cytokines production with decreased numbers of neutrophils and macrophages [3,9]. Kidneys of most females gender have very low expressions of angiotensin-converting enzyme 2 (ACE2) than males gender kidneys. The clinical presentations of symptomatic COVID 19 patients are fever, dyspnea, cough, fatigue, and sore throat. Gastrointestinal symptoms are nausea, vomiting, diarrhea, and abdominal pains [4,17,29]. In advanced cases of COVID diseases, patients may rapidly develop lung failure with acute respiratory distress syndrome, due to aseptic shock, (indicated by marked decreased Blood Pressure) a key challenge attributed with most COVID 19 deaths. Thus, timely need for enabling health education for quality health promotion using multi-integration approach and designs to empower population health with informed decision on primary prevention for COVID 19 disease and its associated varying mortalities between races to achieves sustainable safe population health [4,17,29].

The need for arterial embalmment and disinfection at last office was vital to enhance safety of population health and enhance dignity disposal or cadaver processing for dissection of COVID 19 corpse, as a remedy of calm night exhumation as noted in Bungoma County in April 2020. Embalmment advocacy targets for user friendly global and regional public health policy with holistic and comprehensive informed health change behaviors among population health to sustain and empower safety of population health during and after pandemic [17,27].

For community infection prevention and control strategy required uncontrolled passive SARS-CoV-2 transmission acquisition through herd/community immunity, which remains paramount for any Population health affect by viral pandemic that contain larger patient recoveries than mortalities. Thus, large roaming reservoirs of free SARS-CoV-2 antibodies in air, constantly being neutralized passively by well patient//community with infective antigens tested SARS-CoV-2 positive or are asymptomatic to enable efficient herd or community immunity to developed without necessary getting vaccination or ant toxoid. Regular clobbering of citizen by national police for not wearing properly NPIs may be associated with delayed achievement of herd/ community immunity globally [23,27-29].

SARS-CoV-2 health belief model and its linkages of disposal



Figure

Development and testing of 100oc fermented tea steam inhalation and chemical materials for arterial embalmment

Enable fermented green tea leaves to release catechins and theaflavins in steam covid 19 inhalation for sars-cov-2 in patients with early diagnosis

Regular steaming in fermented green strong tea at 100°C demonstrated to be more effective and efficiency in reducing health risks and high rate of mortalities among patients and persons with above 56 years. Anatomically Corona virus are located in posterior noise, are easily killed by hot temperatures of (60°C - 70°C), "fermented Tea leaves contain catechins and theaflavin content that influence easy opening of the alveoli cells of the infected lung and kills corona virus respectively, catechins have bacteriostatic effects to improve patient prognosis" [1]. Also drinking warm lime/lemon drinks dislodges SARS-CoV-2 viral load accumulation around oral pharynx to be swallowed into stomach hence killed by stomach HCL acid, thus reduce health risk of moving straight into larynx pharynx and then lungs [23,31]. The survey was confirmed on post graduate students attending to SARS-CoV-2 patients in various parts of the country at same time practicing steam inhalation before carrying out physical lectures for a period of 18 months. Case study students were encouraged to eat ginger, garlic, watermelon oranges and lemons boost their body immunity to reduce potential risk of developing COVID 19 disease [15].

Advocacy on chemical ingredients to constitute arterial fluid for embalmment

Embalmment fluids ensure that there is very low or no risk/ harm or fear involved when handling infective corpse by contact, ensure preservation of the whole body in a "life like manner" disinfect, prevention autopsy changes, (putrefaction and autolytic actions associated with cathepsin enzymes) [15,16], prevent contamination with insects and maggots and restore dead cells and organs [2,18]. The aims of embalming corpse for cadavers preparation is to retain their anatomical architectures in utilization as distinct medical educational tools, which are achieved thorough and complete preservation to soften tissues, color muscles and organs with at least of a brown dark color for the muscles, color arteries, nerves and veins and harden soft body organs such as brain, spleen lungs and heart with good long-term structural preservation [21]. Embalming prevent desiccation, and fungal or bacterial growth and reduce both potential biohazards and environmental chemical hazards [3,4,21]. Embalming fluids are mainly grouped as preservatives, germicides or disinfectants, modifying agents includes: buffers, surfactants, wetting agents, and anticoagulants. Dyes, and other vehicles like water are constituted to form embalmment fluid [17,19].

Enable formaldehyde as preservative and tissue hardener

Formaldehyde solution also called formalin dissolved in 37% to 40% formaldehyde gas in water by volume and mass. Formalin may be hazardous compound when exposed for longer period and its vapor is toxic [25]. Formaldehyde was first used in human cadaver in 1899. Over 100 years later, very little has fundamentally changed in basic chemistry and is essentially the chemical of choice for human cadaver embalming in neat concentration [17], formaldehyde is an excellent tissue fixative, due to its associated extreme rigidity/ firmness which can be reduces by adding 0.025M sodium pyrophosphate, with or without additional 0.001M magnesium chloride to influence the muscles to remain pliable and the joints freely and movable.

Formalin is bactericidal, viralicidal fungicidal and insecticidal due to its associated extreme rigidity/firmness property [3]. The antiseptic properties of formalin is demonstrated by prevention of

pathogen and entry of decaying organisms, and that formaldehyde preserves tissues without destroying their delicate structure. Formalin when mixed with alcohol it neutralize paraformaldehyde gas [17], release when react with tissues, destroys putrefactive organisms and react with proteins in it forms a new chemical compounds like resins like material, which are stable and unfit as food for organisms thus forming cadaver maturity [5].

Besides hardening, formaldehyde has several further advantages for embalming purposes [2] rapidly coagulates the blood and converts the tissues to a grey color when it minces with blood, fixes discolorations, dehydrates tissues, constricts capillaries, deteriorates with age, and has an unpleasant odor. Too much formalin tends to create moulding when the embalmed cadaver is left exposed for a protracted period of time in the dissecting laboratory [6]. Actually, formaldehyde is an aldehyde gas and in formalin it does not even exist as an aldehyde; 99.9% of formalin solutions exist as methylene glycol and its various polymers, with the true monomeric form present at only 0.1% [6], in the anatomical context of dissection laboratory, the adverse effects of formaldehyde have been studied extensively it may be felt as an irritant and causes mild eye and mucous membrane complaints. Acute exposure to formaldehyde may reversibly diminish the sense of smell. Acute and chronic skin exposure may produce irritation and peeling, as well as an allergic contact [9].

Glutaraldehyde is credited to have superior properties to formalin, react to form α, β-unsaturated imino type reaction products that are highly resonance-stabilized and very resistant to acid hydrolysis and rehydration [20]. Glutaraldehyde appears to react chiefly with the amino groups of lysine, but also tyrosine, tryptophan and phenylalanine. glutaraldehyde react with protein structures in wide pH range, and as a disinfectant agent is effective against most microorganisms including viruses and spores making it many times more effective as a disinfectant than formaldehyde [12]. In embalming glutaraldehyde, is quite contrast to formaldehyde in the slowliness to diffuse, but it provides rapid and non-reversible final reaction with proteins, thus glutaraldehyde is expected to deliver more endpoint permanent fixation but perfuse the tissues slowly, while formaldehyde perfuse tissues rapidly but only forms irreversible fixation at a very slow rate [10]. Is a weak allergen that irritant to bronchial and laryngeal mucous membranes and prolonged exposure could produce localized oedema and other symptoms suggestive of an allergic response? [17].

Enable alcohols as bactericidal and bacteriostatic against vegetative pathogens

Alcohols contain bactericidal (Kills bacteria) and bacteriostatic (inhibit reproduction of bacteria without killing it), or action against vegetative forms, depending on concentration and condition of the disease in the corpse. They have a wide range of antiviral, antifungal, and antimycosal effects which function by protein coagulation/denaturation. Proteins are not denatured as readily in the absence of water than by mixtures of alcohol and water [12].

Methyl alcohol is toxic to organisms and also has disinfectant properties during embalmment, prevents polymerization of formaldehyde in the embalmment fluid with tissues to form paraformaldehyde gas that cause smell in mortuaries. Thus, alcohols acts as an anti-refrigerant, aids in establishing the proper density of the fluid, and methanol coagulates albumin affect Humans and non-human primates by methanol poisoning and toxic effects are characterized by formic acidemia, metabolic acidosis, ocular toxicity, nervous system depression, blindness, coma and death. Nearly all of the available information on methanol toxicity in humans relates to consequences of acute rather than chronic exposure [19]. Ethanol is widely used as alcoholic solvent and anti-infective agent, also washes out (excessive) formaldehyde in histological specimen for museum, ethanol preserves cell for exfoliative cytology and when combined with glycerin, it denatures the proteins reversibly, affecting the hydrate coating of the tertiary structures and disrupting the Hydrogen bridge bonds [20].

Mediate sodium nitrate (Anticoagulant, preservative and bactericidal)

Sodium nitrate is well known as a preservative “curing salt” of ancient embalming and serves to inhibit the growth of bacteria specifically Clostridium botulinum in an effort to prevent botulism and helps preserve the color cured meat It does not affect cathepsin D enzyme activity, but inhibit cathepsin L activity at very high concentrations and even enhance Ca-dependent proteolytic activity.

Enable phenol (Disinfectants and bacteriostatic)

Phenol or carbolic acid is a colorless or white crystalline solid with a relatively low melting point. The majority of phenol and phenol derivates are used in resins and resin based products such as formaldehyde and bisphenol resins from acetones, smaller por-

tions as general disinfectant and finally in the production of organic dyes. The disinfective properties of phenol have been known throughout most of history. The first documented and widely publicized use of phenol as a disinfectant in the medical field was by Lister in 1867. Phenol is bacteriostatic in as small a concentration as 0.2% by virtue of its ability to deactivate enzymes within the cell and affect cell permeability [10]. Phenol becomes bactericidal/fungicidal at concentrations of 1.0 - 1.5% and actually destroys cell walls. There is a marked increase in bactericidal activity with halogenation or alkylation of the basic phenol molecule. The mode of action of phenol and its derivates against various bacteria, fungi and viruses is due to its ability to denature and precipitate protein and proteinaceous products and its ability to effectively attack and destroy the cell wall due to its lipophilic character [10].

Liquefied phenol prevent moulding effectively Bradbury and Hoshino, (1978), and an excellent fungicide and bactericide, but it denatures proteins with resultant drying and discoloration of tissues and has an unpleasant odor [10]. Phenol also reverse the greying effects of formaldehyde embalming, is a media of lower preservative strength with superior penetration ability thus good disinfectants, phenol is corrosive to the throat and stomach causing nausea, vomiting, cyanosis, loss of blood pressure, convulsion, and pulmonary oedema [10].

Enable buffers

Embalmer PH (normal 7.38 - 7.40), Sodium borate (Borax): Sodium borate acts to buffer the embalming mixture at pH 9 which protect against mould growth and bacterial decomposition, other salt that may act as buffer during embalming are: Sodium bicarbonate, Sodium carbonate and Magnesium carbonate [19].

Enable humectants and wetting agents

Glycerine/glycerol is not a disinfectant but it increases the efficiency of formaldehyde penetration in tissue and cells as it render a small amount of formalin per time, Sodium lauryl sulfate: surfactant agent, is a non-ionizing surfactant, enables embalming fluid to access all areas of the cadaver by stretching cells [17,20].

Mediate anticoagulants

Used in embalming includes Sodium citrate (also buffer) and Sodium oxalate [19]. Several preservative mixtures have been added salts to control the denaturing anions on DNA since cations have less effect with preservatives used. The sodium salts of trichloracetate, thiocyanate, perchlorate and iodide are commonly used during the embalming. Cations had only a small denaturing effect on various proteins. Calcium chloride and potassium thiocyanide were shown to be potent structural destabilizers and denaturants. Salts such as ammonium sulphate and potassium dihydrogen phosphate strongly stabilized the native conformation of the proteins [20].

Enable hypochlorite (Viracidal)

0.5% sodium hypochlorite or 14% calcium hypochlorite granules in water rapidly inactivated in the presence of organic material; therefore, regardless of the concentration used, it is important to first clean surfaces thoroughly with soap and water or detergent using mechanical action such as scrubbing or friction [11]. High concentrations of chlorine can lead to corrosion of metal and irritation of skin or mucous membrane, in addition to potential side-effects related to chlorine smell for vulnerable population health associated with allergies such as asthma. Solid formulations are available as concentrated high-test hypochlorite (HTH) of (65 - 70%) and as chlorine or calcium hypochlorite powder (35%) [12]. To produce the final desired concentration, the weight (in grams) of calcium hypochlorite that should be added per liters of water can be determined based on the calculation thus 0.5% aq is equivalent to 14.3% granules dissolved in a liter of water [13]. Soak dissected autopsy or embalming kit into hypochlorite for one hr. and rinse in running water. Wash soiled floor and embalming table by flooding with hypochlorite for 1 hr. And continue with the normal SOPs of hygiene. Ensure safety of personnel and avoid contamination of the workplace, transportation of infectious non embalmed body should be decontaminated at bed site during last office using freshly prepared embalmer solution into all orifices and sprinkle it on the body before wrap and seal and impermeable plastic bags [3,27].

Incinerate other infectious waste plastic material that came into contact with infectious material. Decontaminate mortuary flour with hypochlorite for 1 hr., then mop in the normal way.

For non - disposal instrument decontaminate by boiling at 1000C°. Or autoclave for all heat resistant instrument or chemical method for dry goods surface and heat sensitive instruments.

Autoclave/chemical methods for dry goods then wash in water to remove residual disinfectant before drying [3,27].

Mediate surfactant and dye ingredients

Surfactant ingredients makes the dead cells and tissue to stretched like skin when salts in added in the arterial fluid, adds value of restorative art science on the human remain meant for viewing before disposal is made. Eosin yellow power is suitable for coloring dead if correct concentration in percent is constituted with arterial fluid for embalming.

Standard procedure of enabling fermented tea leaves to release catechins and theaflavins (Flavonoids):

1. Fresh green leaves (Figure 3) are fermented by wrapping in wet dark nylon paper to contain develop flavonoids and contain moisture for (4 - 7 days).

2. Immersed in boiling water in on source of heat and allowed patients to be covered with heavy cotton cloth in head and thorax regions while inhaling the steam for 15 to 20 minutes.

3. Fermented flavonoids released catechins and theaflavins to kill SARS-CoV-2 in patient respiration system.

4. May be efficient for elderly and early clinical stages of SARS-CoV-2, patients.

Standard procedure of embalming sars-cov-2 corpse to enable safe disposal or dissection as distinct medical tool:

1. Mortuary service providers must wear full NPIs with N95 respirator or gears.

2. Preferably two technical staffs should be allowed in procedure room, one active in handling embalming and the second cleaning and passing instruments mainly to avoid cross contamination in the work area.

3. Human remains must have facial area covered with a disinfectant soaked cotton cloth barrier before any manipulation and the entire remains must be sprayed down with disinfectants.

4. Human remains clothing and personal effects must be bagged and then double bagged in a way not to contaminate the second bag.

5. Human remains with retained facial area covered should receive a complete cleansing with embalmer's disinfectants, while adhering to "contact time" of at least 1hr the product to be utilized.

6. Provide a plastic see-through barrier should be placed over the entire head area to create second facial barrier. The facial area should be also disinfected and cleansed last.

7. Clean eyes, nose, ears, mouth and throat using a strong disinfectant. Adhere to the contact time of the product. The plastic barrier must remain in place as you can work with your hands under the plastic at all times.

8. After the nose, mouth and throat are cleaned, place packing (i.e. cotton) with disinfectant into the throat and nasal area in attempts to completely occlude the passages from the throat leading to the nose and mouth.

9. Set features of the dead body accordingly.

10. Raise vessels and prepare for arterial injection.

11. Mix an arterial solution into embalmment tank set and maintain pressure of the injector pump of 4 - 5 Pascal throughout the procedure.

12. Use a drain tube for your drainage to create a closed system between you and the blood discharged during the embalming. The horse leading off the drain tube should be placed down into the waste drain to prevent exposure to the blood as much as possible, (there should be no free-flowing drainage down the table) [7,17].

13. Begin your injection on a closed system (drain tube closed). A low rate of flow is suggested so you don't cause distention.

14. Allow as much injection to take place without causing distention or risking purge. Remember, the plastic barrier is still in place over the head and facial area.

15. When you have injected a sufficient amount of chemical, turn the machine off and wait for 15 - 20 minutes to allow the chemical to work and accomplish as much disinfection as possible in the allotted time.

16. Begin injection again and open drainage to allow the release of pressure.

17. Perform topical embalming and intermittent drainage throughout the embalming process, allowing pressure to build and then release.

18. Follow normal embalming procedures to ensure a well embalmed body (i.e. use more arterial chemical if needed per case analysis). Stop after arterial injection.

19. Wash and disinfect remains again (terminal disinfection).

20. DO NOT aspirate the human remains from any body cavity for toxicology for a minimum of 24-hours after arterial injection [17].

Pre-testing of tools and teaching medical material

Stem COVID 19 Inhalation clinical trial and arterial embalmment tools were pretested by inhaling fermented green tea leaves at isolated center with patients in Trans Nzioa County. Embalming SARS-CoV-2 corpse of over 48 hrs, old was done in Kakamega level 6 facility and Maseno University Medical School, Human anatomy laboratory respectively and left for 6 months to enable embalmed SARS-CoV-2 corpse to mummify, where by protein molecules were converted into resin like material, to form cadaver (distinct tool for medical education). Pilot study in clinical case study mediated for validity, viability and suitability of specific ingredients, and tools to ascertain quality infection prevention control concepts in the population health.

Conclusion

100°C Steam COVID 19 inhalation in fermented tea leaves kills SARS-CoV-2 by denaturing proteins, while leaves contain catechins and theaflavins that enable opening of alveoli in lungs and kills corona virus respectively. Since SARS-CoV-2 microbes dies 48 hrs after death, machinery embalmment is vital for quality infection, prevention control to enable safe disposal and cadaver dissection as distinct medical educational tools in the pandemic era of COVID19.

Appendices

Appendix 1: Public Health Burial Team Making Disposal by Burial with Limited Involvement of Next of Kins and Community.

Figure 1: Above demonstrates typical subjective indicators attributed to limited synergistic participation of MOH burials of COVID 19 dead without collaborating with specific community cultural and religious rite thus, enabled planned calm night exhumations in the absence of county /security administrations [17].

Appendix 2: 100°C steam covid 19 inhalation in fermented green strong tea to improve population health.

Figure 2: Demonstrates 100°C COVID 19 Steam inhalation concept mixed with fermented green tea leaves/green Tea leaves to release catechin that enable easy opening of alveoli cells of infected lungs, SARS-CoV-2 are killed by theaflavins and steam at 60°C to 70°C for (10 -15) minutes [23].

Appendix 3: Green tea leaves (Catechins and Theaflavins).

Figure 3: Fermented Green tea in (Flavonoids) group contain catechins, which when inhaled by COVID 19 patients enable opening of alveoli in the infected COVID19 lung, reduces fragility and permeability of capillaries, normalize human tissue respiration, prevent development of atherosclerosis and cancers since are antioxidants. Fermented green tea leaves also release theaflavin that neutralize corona virus along respiratory system [31]. Green tea leaves also contain theanine, a provitamin A-carotene, which provides a functional state of mucous membranes of the eye, nose, pharynx, larynx, respiratory tract, Afonina [1].

Appendix 4: Map of Western Kenya.

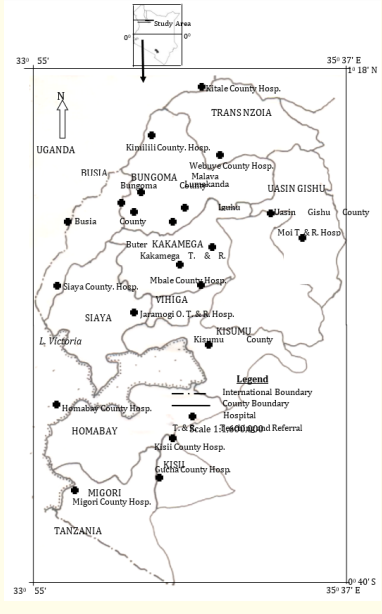


Figure 4: Show distributions of public mortuaries in western Kenya, source [17].

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