

Kriyakala of Diabetes Induced Microalbuminuria with Special Reference to Vrukkaroga - A Review

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ABSTRACT

Introduction: Microalbuminuria is slight increase in the albumin excretion through urine, due to increased glomerular permeability. This is the earliest manifestation of diabetic nephropathy. Presence of urine albumin more than 30mg and up to 300mg, at least two out of three urine samples examined within six weeks period. Due to chronic history of diabetes, triggers the excretion of urine albumin. It reflects the state of increased endothelial damage. **Objective:** To critically analyze and review the Kriyakala of diabetes induced microalbuminuria. **Methodology:** A review conceptual study. Literature reviewed on proper understanding about chikitsa avasara of DIM(Diabetes induced microalbuminuria) from modern medical literature with its critical interpretation in terms of ayurveda Siddhanta. **Discussion-** Kriyakala has special entity in order to achieve the chikitsa. The avastha wise changes provides chances to treat the Vrukkaroga, ultimately in order to prevent further progression of the disease. Hence a wise physician has utmost importance in understanding and implementing the concept of kriyakala in vyadhi along with its modern correlation. **Conclusion:** Multicentric large sample study has required to prove the evidence based fundamental principles of Kayachikitsa. Hence utilising the concept before planning treatment held the head of physician to the height.

KEYWORDS: Microalbuminuria, Diabetes induced microalbuminuria, DIM

INTRODUCTION

Ayurveda emphasizing being healthy gives detail description about the interruption through chikitsa step by step. Kriyakala¹ is formed by two words, Kriya is karma, arambha, Upaya, karana can be taken as performing work, action. Kala; avasara, avastha of vyadhi can taken as enumerate, fixed point of time. Kriya which measures the bhesaja and kala which provides time for planning that karya. Kriyakala is also considered as chikitsa avasara kala. Kriyakala is defined as the stages of progression of dosha which can intervene to further development of pathogenesis through chikitsa.

In Vrukkaroga² understanding of kriyakala plays vital role, might be due to goodalinga marmashrita³ vyadhi. Abnormal changes in the doshas due to viruddhahara sevana because of current modernisation of society. Doshas are culprit vitiation

continues to become profound, gives rise to disease, if it remains unchecked results into threatening of life. Kriyakala gives an insight into the development of disease and gives exact idea about etiological factors gives rise to increased formation of doshas, travels to various sites and causation of disease.

Its importance is enumerated by acharya Dalhana like “*apapte kriyakala prapte va na vrita kriya, kriyaheena atirikta va sartheshu api na siddhati*”⁴. Explains that one has to treat the vyadhi before it commencing to progression, if left untreated then it ends up with asadhya. Uttarottara kriyakala becomes balavan⁴, so that vyadhi may ends up with asadhya from sukhasadhya. Hence the sanchaya, prakopa, prasara, sthanasamshraya, vyakta, bheda⁵; shatkriya kala has been understood before implementation of specific chikitsa.

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Hence, an attempt has been made to understand about kriyakala in vrukkaroga with special reference to diabetes induced microalbuminuria.

AIM AND OBJECTIVES

To critically analyze and review the Kriyakala of diabetes induced microalbuminuria with special reference to vrukkaroga.

MATERIALS AND METHODS

A review conceptual and analytical study. Literature reviewed on proper understanding about chikitsa avasara of DIM (Diabetes induced microalbuminuria) from modern medical literature with its critical interpretation in terms of ayurveda Siddhanta. Analyse the detailed interpretation of ayurveda and modern concepts based on the fundamental concept of Ayurveda.

SANCHAYA- Here patient feels aversion towards ruksha, ushna ahara vihara, liking towards guru, snigdha, Picchila Madhura ahara vihara. Which increases kapha it facilitates kledavardhana due to Jataragni mandya and dhatwagni mandya, in turn causes swasthana dosha vriddhi, vitiates vata and pitta. it is considered as agni stanasthita vikriti. It might be in the Avastha of goodalinga. Sometimes manifest the various lakshanas like anga gourava, alasya, dourbalya, mandoshmata.

Here Common consequence of long-term reduction of renal mass, set of progressive mechanisms involve hyper filtration and hypertrophy of the remaining viable nephrons. As it is long term process involves set of structural and functional changes. Which is not shown any classical changes in the biomarkers and symptomology⁶

PRAKOPA-Dosha Dushti further progresses due to excessive consumption of nidana and prajnaparadha, results into tridosha dushti. Produces ati kleda from rasa, rakta, mams, meda dhatu. it is responsible for avarana to the vrikavahini srotas. It has two views - chayapurvaka & achayapurvaka. Chayapoorvaka; Nitya kleda utpatti due to santarpana vyadhi like Prameha and santarpana ahara, vihara. Achaya poorvaka; direct manifestation of DIM while screening other factors. Considered under accidental rule out.

Eventually, short-term adaptations become maladaptive as the increased glomerular pressure and flow predisposes to distortion of glomerular architecture, associated with sclerosis and dropout of the remaining nephrons. Uncontrolled hyperglycaemia, which accounts for structural alterations of the renal cells. These structural changes include thickening of the basement membrane of

nephrons, reduced filtration rates, expansion of the mesangium⁶.

PRASARA- In this Avastha with the help of Vyana Vayu, Kupita dosha spreads throughout the body. Due to Jala mahabhuta causes bahudrava kapha leads to kledavridhhi, becomes sarvadehika dhatugata kleda along with dosha. Poshya & poshaka amsha utpatti abhava. Pakwamashayastita pachaka pitta dushti (Reduced Anna vivechana) Ama Utpatti then Samana Vayu dushti (reduces ignition of pachaka pitta), Avalambaka & Kledaka kapha vriddhi. Vyana Vikshepana is not able to achieve properly. kledavahana karma kshaya by mutravaha srotas and kledavidrudhi karma kshaya by swedovaha srotas will manifest.

There is an overexpression as well as an over production of GLUT-1 protein in mesangial cells, along with high levels of TGF-B1 increasing cell proliferation. Early biomarkers include the presence of α -1 Microglobulin, β -1 Microglobulin, nephrin, cystatin C might show changes in some extent. But not able to rule out through routine RFT⁶.

STHANA SAMSHRAYA- Here dushita dosha and dushya causes stanasamshraya in vrukka, due to ruksha guna causes shaitilyata of vrikka. Kaphakshaya reduces snigdhata, mardhavata from the vrikavahini. Hence vrukavahini srotas loses its properties. Here it will start to build up the pathogenesis.

Here Renal Functional Test, Gold standard Biopsy shows marked changes, more than normal level. Mesangium thickening and glomerular permeability remains irreversible. Podocytes loss has been noticed. Architecture and physiological changes remain irreversible⁶.

VYAKTA-Manifestation of disease takes in 2nd stage onwards; it is recognisable based on vyakta lakshanas and laboratory parameters. Apana Vayu dushti along with Pancha vata dooshana involved. It can be assessed based on upashaya and anupashaya.

Leakage of protein from glomerular basement membrane is noticed along with pedal oedema, peri orbital oedema, nausea, breathing difficulty, altered bowel habits, altered frequency and consistency of urine, delayed or indigestion of food⁶.

BHEDA-4th and 5th stage of pathology considered under this avastha, causes raktakshya, trimarma dushti. Prana Vayu Harana results into Marana.

Here nephrons lose its properties and unable to regenerate due to chronicity of pathology, it hampers the overall physiological mechanism of excretory system followed by appearance of various vascular

complications. It may be micro or macro and end stage kidney failure which may ends up with death⁶.

DISCUSSION

Kriyakala has special entity in order to achieve proper chikitsa in the conditions of vrikkaroga, which has a spectacular design broad spectrum of multisystem involvement. The avastha wise changes provides chances to treat the Vrukkaroga, diabetes induced microalbuminuria⁷ has separate view in the contemporary science, leakage of albumin⁸ can be considered as kapha sara hani, vitiated vata is responsible for degenerative changes in glomerular filtration membrane hence affects the permeability, Pitta and rakta are having ashrayee⁹ sambandha, vrikka is formed from rakta and meda prasada, hence indirectly it quotes that raktakshaya due to this vrukkasthanastita meda dushti. Mutual understandings regards the concept of vrukkaroga plays role in medovaha, rasavaha, raktavaha and mamsavaha srotas. ultimately in order to prevent further progression of the disease. Hence a wise physician has utmost importance in understanding and implementing the concept of kriyakala in vyadhi along with its modern corelation.

CONCLUSION

Multicentric large sample study has required to prove the evidence based fundamental principles of Kayachikitsa. Hence utilising the concept before planning treatment held the head of physician to the height. Vrukkaroga is irreversible condition, but can able to manage the disease well in chikitsa avasara kala of sanchaya, prakopa and prasara. Hence this is concluded that by proper understanding.

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