



Study the Corelation of Vrikkautpatti in Ayurveda with Special Reference to Chronic Renal Failure

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Abstract

The primary function of the urinary system is to help for keeping the body homeostasis by controlling the composition and volume of blood. Vrikka is comparable with kidney of contemporary science. Vrikka (kidney) regulate the removal of wastes from the blood in the form of urine. Vrikka is considered as Moolsthana of Medovaha Srotas. Vrikkaroga can be possible due to disequilibrium of Shonita and Meda as they form from it. The kidney diseases mentioned in modern science and their common symptoms can be correlated with Mutraroga described in Ayurveda. So for the assessment of symptoms included in Vrikkaroga this study was initiated. 30 cases of chronic renal failure were evaluated for the assessment of symptoms related to Mutraroga. In Ayurved Vrikka is told in relation of Medovaha Srotas and the pathology related to Mutra is considered in relation to Basti. By taking in consideration the modern anatomy Vrikka are correlated with kidney and cases of CRF were studied. Considering the diseases related to Mutra the related symptoms are included in Vrikkaroga for study. Mutraroga are mentioned in various Ayurvedic compendia and other literature, Acharya Charak had described the Mutraroga in

Kiyanta Shirashiy chapter of Sutrasthana. In case of renal disease, the assessment for symptoms of Vrikkroga shows that even a small injury to Vrikka can be result in Parshwa Vedana (back pain) or Mutrakshaya (retention of urine). The clinical assessment of Shonita and Meda showed vitiation in both the factors with significant 'z' values in this study.

Keywords: Kidney, Mutra, Renal disease, Vrikka, Vrikkaroga

Introduction

The Ayurvedic approach to Mutravah Srotas is highly logical, conceptual and scientific. The primary function of the urinary system is to help for keeping the body homeostasis by controlling the composition and volume of blood.[1] However Ayurved explains Mutrotpatti in Pakwashaya during digestion process through the absorption of Toya (Jaliyaansha) in it.[2] Vrikka are considered as Moolsthana of Medovaha Srotas as per Ayurved.[3] Theory of Vrikka Utpatti in Ayurveda is indistinct and scattered as assort Acharyas in our science have their own opinion regarding its development. Vrikka is developed from the essence part of Rakta and Meda as per Sushruta. The clinical manifestations of Vrikkaroga

can be possible due to disequilibrium of Shonita and Meda as they form it. [4]

In view of the increasing evidence of urinary infection or kidney diseases in the present era,[5] the aspect of involvement of originating factors of Vrikka in their state of disequilibrium, whether contributes in the manifestation of the disease of kidney was the research question.

Ayurved suggest Angotpatti on the basis of basic components (Dosha, Dhatu) of body.[6] These constituting essential components may be helpful for understanding the etio-pathogenesis of diseases related to these organs which will be helpful for the management of diseases. Hence sincere attempt is made in the present study, to see the co-relation of the constituent factors of Vrikka with that of its diseases.

Aim

Assessment of concept of Vrikka-Utpatti in Ayurveda with reference to chronic renal failure.

Objectives

To assess the correlation of Rakta and Meda in chronic renal failure. To validate the concept of Vrikka-utpatti (Rakta-Meda Prasadat) in patients of renal failure.

Material and Methods

Study design: Observational

Literary study was completed through standard Ayurveda compendia with their commentaries, modern text books and journals.

Data collection: The 30 patients of chronic renal failure were examined as per CRF (Case Record Form).

Inclusion: The diagnosed cases of chronic renal failure, irrespective of sex & socio-economical status.

Exclusion: Acute renal failure.

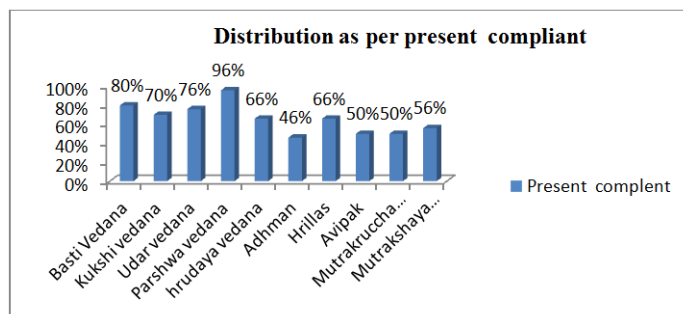
The reports of necessary investigations were obtained to confirm the diagnosis of patients (KFT & urine analysis).

The obtained information was processed under statistical methods, interpreted and conclusions are drawn from it.

Observations and results

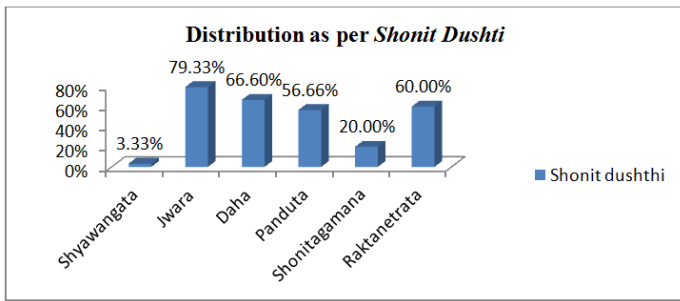
Several factors are responsible for genesis and development of body. The role of five basic elements and Shadbhava is inevitable according to Ayurveda.[7] Two Vrikka are developed from the essence of Shonita and Meda. The state of disequilibrium of these constituting factors was assessed with the help of symptoms of Dusthi, Vriddhi and Khaya of these entities was assessed as per CRF. 30 patients of chronic renal failure were selected by convenient sampling for this study. The CRF was prepared on the basis of patient's present complaints as well as clinical assessment of Meda and Shonita. Patients were asked about complaint of Vrikkaroga according to symptoms mentioned in Samhitas and text book. According to presence of symptoms gradation was given for each parameter. For the diagnosis of kidney disease with Ayurveda perspective textual mentioned symptoms were analyzed in the patients of chronic renal failure. [8] The results obtained in the study are provided in Graph-1. Six symptom i.e. Basti Vedana (24 patients) and Kukshi Vedana (21 patients) Udar Vedana (23 patients), Parshwa Vedana (29 patients), Hrillas (20 patients) Hrudaya Vedana (20 patients) showed Grade 3 findings with significant z value.

Graph-1: Distribution as per Present compliant



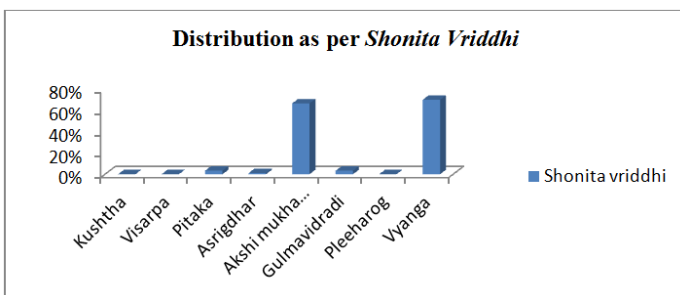
Among six symptoms of Shonita Dushti;[9] Jwara, Daha, Panduta and Raktanetrata were found highly Significant. (Graph-2)

Graph-2: Distribution as per Shonit Dushti



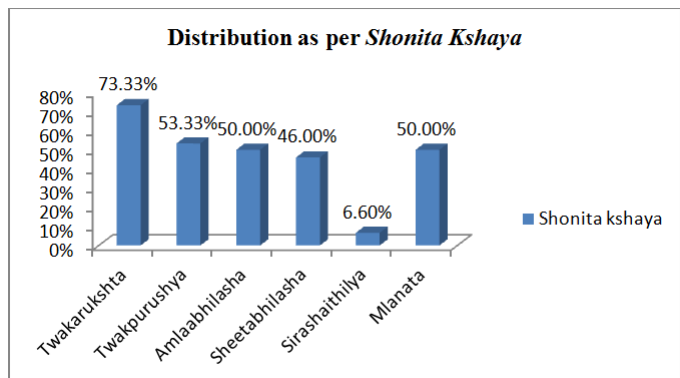
The symptoms of Vyanga and Akshi-Mukha-Medra-Guda Daha were found more significant with grade 3 finding compared to other symptoms of Shonita Vriddhi. [10]

Graph-3: Distribution as per Shonita Vriddhi.



All 5 symptoms except Sirashaithilya of Shonita Kshaya [11] were found more significant Twakrukshta was highly significant and found in 22 subjects.

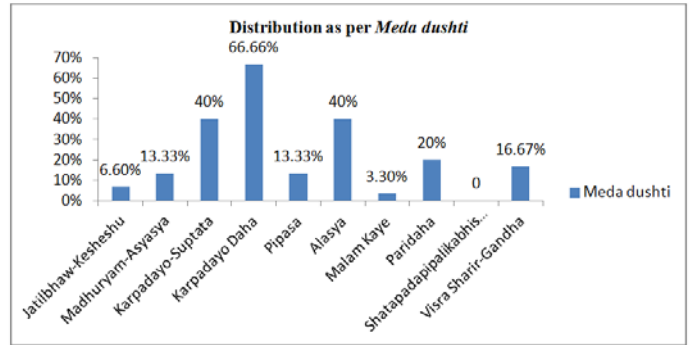
Graph-4: Distribution as per Shonita Kshaya



Meda

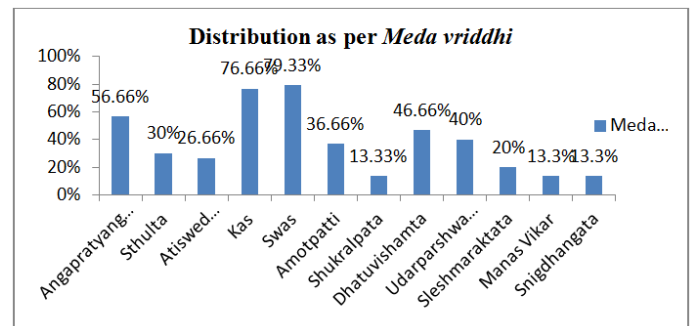
Karpadayo Daha and Karpadayo Suptata were more significant among Meda Dushti symptoms similarly Alasya was prominently seen in these subjects. As urine quantity was not readily available & exposed to insect the finding in case of 'Shatapadapipalikabhisha Mutrashya' was not recorded.

Graph-5: Distribution as per Meda Dushti



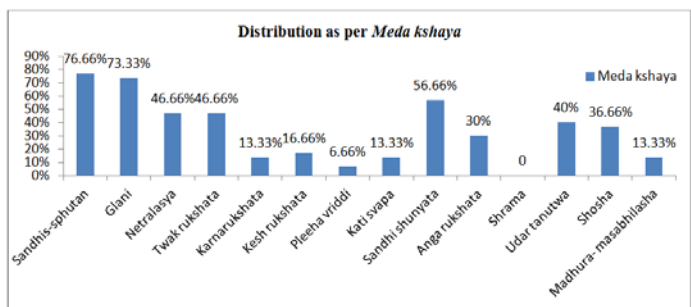
Among Meda Vriddhi symptoms Swasa, Kasa, Angapratyanga Kshinata, Dhaturvishamta and Udarparsawa Vriddhi were found most prominent and observed in more than 40% of subjects.

Graph-6: Distribution as per Meda Vriddhi



Glani and Sandhisphutan symptoms were Grade-3 significant, where Sandhisphutan is found in 76.66% of subjects. Other symptoms like Netralasya, Twakrukshata, Sandhi Shunyata and Udartanatwa were also significant. [12]

Graph-7: Distribution as per Meda Kshaya



Discussion

Vrikka or kidney is said to be vital for life. To know the embryological aspect and abnormality of Vrikka this study was conducted with aim that the aspect of

involvement of originating factors of Vrikka in their state of disequilibrium whether contributes to the manifestation of the diseases of kidney or not. It is rightly said that the principles of Garbhasharir are based on everlasting and consistent principles of Ayurveda like Triguna, Tridosha and Panchamahabhuta. [13]

Vrikka

It is derived from the root "Vikkadane" means to take. It means that organ which receives and collects Rasa and Rakta from all over the body then it gives to other parts of the body and finally this process is continuous throughout the life. The commonly used meaning of Vrikka is its functions of filtration but no direct reference of Vrikka's in relation to urine formation or blood purification is found in either of the Ayurvedic classics. The organ Vrikka was known from ancient period of Vedas and Samhita but its relation with formation of urine is not established in any Ayurved compendia.

Function of Vrikka

The filtration & circulation of Rakta is the major function of Vrikka. As per ancient thoughts of Acharyas, major vessels are related to Vrikka and these vessels carry "Samana Vayu" which is in the form of "Rakta". Both the words Sira and Dhamani described in context of Vrikka show their involvement in the process of circulation.

Etiopathology of Vrikkaroga

In presence of etiological factors Doshas get vitiated and when these Dosha are sheltered to Mutravaha Srotas then they vitiate the Rasa, which ultimately result in Mutroga. All kind of kidney disease comes under Sira Dushti that is Rakta Vikriti because Sira and Kandara are Updhatu of Rakta. When Rakta Vikriti is due to Meda, the acidosis of blood is increased and kidney diseases occur due to Guru, Sthira and Bruhana Guna of Meda. Chronic renal failures are due to Vayu Dosha.

Chronic renal failure is a condition where normal function of kidney i.e. purification of blood by removing excessive

fats, fluids and toxins is hampered. Keeping in mind this pathology the cases of CRF were assessed with Ayurvedic parameters.

Observational study

For the clinical assessment of Shonita and Meda the symptoms of its Dushti, Vriddhi and Kshaya were assessed to find out which constituting factor of Vrikka get most vitiated in CRF cases. In case of Shonita Dushti out of total six symptoms Jwara and Daha, were found in most of the cases. Rakta Netrata and Panduta also showed significant 'z' values. Though all the four entities significantly found in study are related to Shonita Dushti but these are seen due to Ashraya of Pitta. Pitta is responsible for heat and metabolic activities of the body. So the symptoms found in case of Shonita Dushti are seems to be due to Pitta. The vitiation of Pitta seems to be a factor for pathology of Vrikka Roga.

In category of Shonita Vriddhi Akshi, Mukh, Medhra, Guda Daha and Vyanga were found more than 60% of cases. The symptoms of Shonita Vriddhi Kushtha, Visarpa, Pitika, Asrigdhar, Gulma, Vidhardhi and Pleeha Roga were non-significant. The appearance of Vynga and Daha are again similar as in case of Shonita Dushti which may be due to influence of Pitta on Rakta Dhatu. So the disturbed equilibrium of Pitta is also seen in this class also.

The symptoms of Shonita Kshaya which includes Twak Rukshata, Twak Parushya, etc. showed significant 'z' values in all symptoms except Sirashaitilya. Twak Parushya, Twak Rukshata, Shitabhilasha, Amlabhilasha and Mlanta were prominent in this category. Dravata and Snigdhatata are the properties of normal Pitta as per Ayurveda. It is known that Pitta is Dosha while Rakta is its Dushya. If there is imbalance in Dravata and Snigdhatata of Pitta then there is always possibility of appearance of symptoms like Twak Rukshata and Twak Parushaya. The Shitabhilasha, Amlabhilasha and Mlanata are also similar

to Pittadushti as in above cases of Shonita Dushti. The role of Vrikka is meant of filtration and circulation of blood as per contemporary science; in CRF this Physiology disturbs, the metabolic toxins formed in the blood remains in the body and get accumulate in different body parts. As skin is easily visible from outside the symptoms of their accumulation are first visible on it. It can be said that the symptoms of Shonita Kshaya observed in most of the cases are due to vitiation of Pitta Dosha as per Ayurveda perspective and accumulation of toxins as per modern science.

So the clinical assessment of Shonita in all three categories depicts more significant results in Symptoms of Shonita Dushti & Shonita Kshaya symptoms. The finding in symptoms of clinical assessment of Shonita broadly shows its vitiation due to Ushna, Snigdha and Drava Guna of Pitta. One more important finding in all the three categories of Shonita assessment is that only two symptoms of Shonita Vriddhi were significant, it suggest that symptoms of Shonita Dushti & Kshaya are more important in assessment of CRF. From this it can said that the vitiation of Shonita is in the form of its Kshaya and not Vriddhi. After overall assessment of Shonita in cases of CRF it can be suggest that entities of vitiation of Pitta and Shonita Kshaya should be taken in to consideration while treating the patients of chronic renal failure.

As similar to the clinical assessment of Shonita the clinical assessment of Meda was also done on the basis of above three classes.

In case of Meda Dushti symptoms Karpadyo Daha, Karpadyo Suptata and Alasya were found more significant. Karpadyo Daha is being more prominent in case of 20 subjects. The Guru Guna of Meda may be forming Sthulata and Alasya. The exercise or any physical activity is opposite of Aalasya. The predisposing or risk factor for CKD is sedimentary lifestyle or lack of exercise. So the Aalasya may be due to Guru Guna of Meda could

be the risk factor as per Ayurveda perspective. Among all the symptoms of Meda Dushti; Karpadyo Daha was seen in 66.66% cases. This finding is consistent with finding of Shonita assessment. Meda consists of Guna like Shitata, Dravata, Snigdhatata, etc. If Daha is observed in CRF cases then it can be said that the Dushti of Meda would be in the form of its Hrasa (decrease).

In assessment of Meda Vriddhi symptoms out of its total 12 symptoms, Angapratyanga Kshinata, Kasa, Swasa, Udarparshwa Vriddhi and Dhatuvishamata were observed in more than 40% of cases with Grade 2 and Grade 3 finding. Swasa and Kasa are usually seen in case of Meda Vriddhi is also traced in this study. Form this assessment it can be marked that there would be accumulation of Meda in various body parts in CRF cases. Obesity is one of predisposing factors for renal disorder so Meda Vriddhi is an important aspect as per Ayurved outlook in Vrikka-Roga. The preventive aspect related Medovriddhi should be think of to avoid the renal disease in future.

In Meda Kshaya category out of total 14 symptoms Sandhi Sphutan and Glani had showed Grade-3 significant values, where Glani is found in 73.33% of subjects and Sandhi Sphutan in 76.66% cases. Netralasya, Twakrukshta, Sandhi Shunyata and Udar Tanutwa are the other symptoms found significant in this group. Around 50% of symptoms Meda Kshaya showed significant Z value with Grade 2 & 3 Prominence. It suggested that Meda Dushti is in the form of Meda-Kshaya also. In the assessment of Meda in all three categories viz. Dushti, Vriddhi & Kshaya, the symptoms are significant in all three entities. One thing which can be interpreted as that in some cases symptoms of Meda-Vriddhi are seen & in other symptoms of Meda-Kshaya are observed. From this it can be said that the vitiation of Meda is more prominent compared to Shonita in cases of CRF.

The symptoms of Medo Vriddhi observed in these cases would be due to excess amount of deposition of Meda in

their body. The properties of Meda Dhatu is unctuous, stability heavy, viscous and softness which provide Snehan, Swedan and Dridhtwa to body parts. Its vitiation lead to manifestation of various symptoms depends upon its state of disequilibrium.

In case of Symptoms of Meda Kshaya one thing could be added that the properties of Pitta are opposite to that of Meda. In assessment of Shonita it was observed that there is marked vitiation of Pitta in case of its Ushana & Tikshna Guna. It is possible that this vitiated Pitta may also influence Medodhatu by its Ushana & Tikshan Guna as a result in manifestation of symptoms of Meda Kshaya. After the assessment of Shonita and Meda it can be said that Shonita and Meda both are closely associated with the formation of Vrikka as stated in Ayurved compendia. Marked vitiation of both the entities is observed in cases of CRF. Comparatively vitiation of Meda is more prominent than Shonita and the Pitta Dushti is seen more prominent among Tridosha. Vrikka are meant for process of urine formation as per modern science. If the quantities of Mutra are, reviewed as per Ayurveda, it is having Ushana Tikshna Ruksha, Khara qualities for this purpose of two things is more important.

As Mutra is having qualities similar to qualities of Pitta Like Ushana & Tikshna the Pitta Dushti by these properties will leads some pathology in the normal process of urine formation. So, it can be said that long term vitiation of 'Pitta' or dietary & life style habits promoting vitiation of 'Pitta' would be responsible for aggravation of kidney disorder.

On the other side the qualities like Ruksha and Khara of Mutra may provoke dryness and damage of delicate parts (nephron) of kidney. To avoid this damage kidney would be provide will abundant of fat around it by nature. So Meda Dhatu is equally important to maintain the integrity of Vrikka in its normal state.

Acharya Sushruta and other compendia have told the 'Vrikka Utpatti' from the essence of Shonita and Meda. In this study the linear association between Shonita, Meda and disease of Vrikka are formed. So it can be said that constituting factor of organs as per Ayurveda have definite relation with their state of disequilibrium in the body. Therefore some protocols may be generated for prevention and management of disease related to Vrikka and other body organs.

This study was truly focused on the concept of organogenesis as per Ayurveda so the assessment of Shonita and Meda was done. The vitiation in both Shonita and Meda is detected with significant 'z' values in this study. So the alternative hypothesis "there is correlation between Utpatti of Vrikka with that of its constituting factors i.e. "Shonita and Meda" is accepted.

Conclusion

The clinical assessment of Shonita in all three categories depicts more significant results in symptoms of Shonita Dushti and Shonita Kshaya. The imbalance in Shonita in this study is usually due to the Pitta. In all the three categories of Shonita assessment, either Grade-2 or Grade-3 significant results are detected. In comparison with the vitiation of Shonita in all the three categories i.e. Dushti, Vriddhi and Kshaya the symptoms of Meda showed more significant results. Because finding observed in assessment of Shonita were mostly associated with the vitiation of Pitta.

There is more involvement of Meda entity in the formation of chronic kidney diseases compared to Shonita. The involvement of Snigdha, Sthira and Guru Guna of Meda is remarkable as these causes Srotorodha similar to retention stated in contemporary science.

In overall assessment of Shonita and Meda, there is remarkable involvement of Pitta in its perverted form for manifestation of chronic kidney disease. The clinical assessment of Shonita and Meda showed vitiation in both

the factors with significant 'z' values in this study. So the correlation between Utpatti of Vrikka with that of its constituting factors i.e. Shonita and Meda is established.

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