



Clinical Evaluation Of Avayav Utpatti Siddhant Wsrt Cancer Metastasis

Jagtap Manoj Gogle Vivekanand*

YMT AYURVEDIC MEDICAL COLLEGE, KHARGHAR

Corresponding Author – vdmanojjagtap@gmail.com

ABSTRACT – Sushruta has mentioned about avayav utpatti siddhant. Cancer spreads from one organ to another called as metastasis. There is no thumb rule for deposition of secondary metastasis. This avayav utpatti siddhant can be helpful to predict secondary deposition. In 1779 cases of cancer of 9 primary sites were studied and avayav utpatti siddhant proved significant role in secondary metastasis.

KEY WORDS – CANCER, METASTASIS, AVAYAV UTPATTI SIDDHANT

INTRODUCTION- The concept of Garbhavkranti has been described and elaborated by eminent Acharya Sushrut. In the starting chapter of sharir sthan, Acharya has described origin of universe and similarities between outside world and inside body.

Acharya has explained that combination of “Shukra” and “Shonita” is called “Garbha” and when the soul enters it beyond a living entity. This Garbha grows evolves and become self sufficient in mothers womb with help of Panchamahabhutas. The concept of organogenesis is known as Avayav Utpatti Siddhant. Sushruta has mentioned formation of various organs by means of dosha and dhatu. Organs like Yakruta (liver), Pleeha (spleen), Phuphus (lungs), Hriday (heart), Vrukka (kidneys), Unduka (Caecum), Jivha (tongue), Vrushana (testes), Antra (colon), Guda (rectum) and Basti (urinary bladder) are described according to involvement of dosha and dhatu at time of organogenesis.

Mainly Vaat, Pitta & Kapha are dosha and dhatus like Rakta, Maansa and Meda are dhatu which take part in formation of above said organs.

Cancer is disease where from one site to other site/sites it spreads and called as metastasis. There is no fixed rule for secondary deposition. Although many theories are put forward but none is universally accepted.

Prediction of secondary deposition will help significantly in treatment of cancer. Here in this study role of avayav utpatti siddhant in cancer metastasis was studied. 1779 cases of cancer having primary site either of above mentioned organs were studied for secondary deposition. By statistical analysis the most probable secondary site was determined.

In this study we assumed that there is definite role of avayav utpatti siddhant in metastasis. For example the 107cases of kidney cancer, Lung and liver showed probable site of secondary metastasis. Kidneys are made up of Rakta and Meda. Liver is made up of Rakta, Lungs are made up of Rakta and Phena. In these three organs Rakta is common factor hence there may be due to this common factor secondary deposition was in liver and lungs. 7 out of 9 times this metastasis pattern was following avayav utpatti siddhant.

MATERIAL & METHODS-

1. Pre-diagnosed cancer (1779) patient taken of various organs.
2. The primary site of cancer and secondary site of cancer studied.
3. The relation between avayav utpatti siddhant and cancer metastasis discussed.

Inclusion criteria-

1. Any age group
2. Both sexes

3. The primary tumour of Liver, Spleen, Lungs, Heart, Colon, Rectum and anal canal, Bladder, Kidney, Tongue, Testis.

Exclusion criteria-

1. Primary tumour of other organ mentioned above.
2. Unknown primary origin. (CUP)

Discussion

The concept of organogenesis i.e. Avayav Utpatti is prominently mentioned by the Sushrut.

In Sushrut Sharir sthana chapter 4/24-31. Internal organs like yakrut (liver) pleeha (spleen), phuphusa (lung), Hridaya (Heart), Jivha (tongue), Vrushana (testis), Guda (Anal canal and rectum), Antra (colon), Vrukka (kidney), Basti (Urinary bladder) and unduka (Caecum) are mentioned to be formed by Tridosha and Saptadhatu.

- Yakrut and pleeha made up from the Rakta dhatu.
- Phuphusa is formed from the Rakta phena.
- Hridaya is made up from the Rakta kapha
- Jivha is formed from kapha, mamsa, meda, kapha.
- Vrushana made up from mamsa, meda, kapha.
- Antra, Guda, Basti formed from the kapha, Rakta, Pitta and Vayu.
- Unduka formed from the Rakta mala.
- Vrukka is formed from the Rakta and meda.

This avayav utpatti siddhant has applied aspect. The contribution of various dhatus like Rakta, mamsa, meda is prominent, considering this as a baseline the relation between primary site and secondary site of metastasis was the aim.

For evaluation of role of avayav utpatti siddhant in cancer metastasis data of 1779 cancer cases with known primary and secondary site was analysed.

The test for proportion was applied and prominent, possible secondary sites were highlighted.

Anal canal- In the 26 cases of anal canal as a primary site, Inguinal lymph nodes and liver had significant score by the test for proportion therefore we can say that for anal canal cancer cases, inguinal lymph nodes and liver are predominantly possible sites for the secondary metastasis.

Anal canal is formed by the Rakta, kapha, pitta and vayu. Liver is also formed by the Rakta, hence there is possibility that liver is the prominent possible site. Lymph nodes are cannot consider as an organ and also not mentioned by the Sushrut. We can not evaluate connection between anal canal and inguinal lymph nodes by this avayav utpatti siddhant.

Colon- In the 68 cases of colon as a primary site, liver and peritoneum had significant score by the test for proportion therefore we can say that for colon cancer cases, liver and peritoneum are predominantly possible sites for the secondary metastasis.

Since peritoneum is the covering of intestine can be considered as “Vapavahana” .It is the nearest part of the colon hence there are maximum chances of metastasis directly into it. If we considered as a part of intestine itself again it proves the significance of avayav utpatti siddhant.

Kidney- In the 107 cases of kidney as a primary site of ,lung and liver had significant score by the test for proportion therefore we can say that for kidney cancer cases, lung and liver are predominantly possible sites for the secondary metastasis.

Kidney is made up of Rakta and meda. Liver is made from Rakta .lung is made up of Rakta and phena. Hence there is significant relation between kidney, lung and liver having Rakta as a common factor. This

can be seen, such as lung and liver are the prominent secondary metastatic sites. For the cases of kidney cancer, hence there is significant role in avayav utpatti siddhant in cancer metastasis.

Liver- In the 25 cases of liver as a primary site of, lung and intra abdominal lymph node had significant score by the test for proportion therefore we can say that for liver cancer cases, lung is predominantly possible sites for the secondary metastasis.

Liver is made up of Rakta while Lung is made up of Rakta phena. Rakta is the common factor between them, this is reflected showing lung as the probable site of secondary metastasis.

Hence there is significant role in avayav utpatti siddhant in cancer metastasis for liver

Lung- In the 817 cases of lung cancer as a primary site, statistically for lung cancer intra thoracic lymph nodes and lymph nodes of head, face and neck and pleura are probable site for secondary metastasis.

Pleura can be considered as lung itself according to Ayurveda science, it is covering and not separately mentioned.

Lymph nodes are cannot consider as an organ and also not mentioned by the Sushrut. We can not evaluate connection between anal canal and inguinal lymph nodes by this avayav utpatti siddhant.

Liver shows the slight level of significance for the test for proportion.

Rectum- In the 135 cases of rectum cancer as a primary site, liver and pelvic lymph nodes had significant score by the test for proportion. Therefore we can say that for rectum cancer cases, liver is predominantly possible sites for the secondary metastasis.

Rectum is made up from the Rakta, kapha, pitta and vayu. While liver is made up of Rakta .Being Rakta as common in both organs it reflects and shows liver as the probable organ for the secondary deposition when primary site is rectum.

Hence there is significant role in avayav utpatti siddhant in cancer metastasis for Rectum.

Testis- In the 68 cases of testis cancer as a primary site, lung and intra abdominal lymph nodes had significant score by the test for proportion. Therefore we can say that for testis cancer cases, lung is predominantly possible sites for the secondary metastasis.

The testis is formed by mamsa, Rakta, meda and kapha while lung is made up of Rakta phena. Rakta is the common factor for testis and lung this relation is also seen statistically.

Hence there is significant role in avayav utpatti siddhant in cancer metastasis for Testis.

Tongue- In the 486 cases of tongue cancer as a primary site, lymph nodes of head, face and neck

For the tongue, prominent secondary metastatic sites are the lymph nodes of the head, face and neck, no other organ showed significant incidence. As we know tongue is situated in oral cavity the 1st metastasis occurs into nearest lymph nodes of head, face and neck Lymph nodes are cannot consider as an organ and also not mentioned by the Sushrut. We can not evaluate connection between tongue and lymph nodes of head face and neck by this avayav utpatti siddhant.

Urinary Bladder- In the 46 cases of urinary bladder as a primary site, lung and liver had significant score by the test for proportion. Therefore we can say that for testis cancer cases, lung and liver are the predominantly possible sites for the secondary metastasis

Urinary bladder is formed by Rakta, kapha, pitta and vayu while liver is formed by the Rakta and lung by Rakta phena.

Statistically lung and liver shows significant incidence by test for proportion, after bone and lymph nodes. Bone is not an organ same as lymph nodes, so by excluding bone and lymph nodes there is significant.

The cases of spleen, heart and Caecum cancer were not found in data provided by the Tata cancer Hospital. This may be due to rare occurrence of cancer of these organs; hence we can not evaluate the role of avayav utpatti siddhant for the metastasis of these organs.

The total data of 1779 cases of 9 primary sites of cancer mentioned by the sushrut were studied. The role of avayav utpatti siddhant was prominent for 7 primary sites; hence we can conclude that there is significant contribution of avayav utpatti siddhant in the spread of secondary metastasis.

The scope of further study is to get more number of cases including all the organs mentioned by the Sushrut and if proven, prediction of secondary site will be possible in early stage resulting beneficial for the patient and the society.

CONCLUSION-

- The concept of avayav utpatti is mentioned by the sushruta in sharir sthana chapter no.4.
- To evaluate role of avayav utpatti siddhant for cancer metastasis, retrospective study was performed.
- 1779 cases of different 9 primary sites along with were studied and test for proportion was applied.
- For the 26 cases of anal canal cancer liver showed probable site of secondary metastasis enlightening role of avayav utpatti siddhant.
- For the 68 cases of colon cancer liver showed probable site of secondary metastasis enlightening role of avayav utpatti siddhant.
- For the 107cases of kidney cancer, Lung and liver showed probable site of secondary metastasis enlightening role of avayav utpatti siddhant.
- For the 25 cases of Liver cancer, Lung showed probable site of secondary metastasis enlightening role of avayav utpatti siddhant.
- For the 817 cases of Lung cancer liver showed slight significant incidence as probable secondary site.
- For the 135 cases of rectum cancer liver showed probable site of secondary metastasis enlightening role of avayav utpatti siddhant.
- For the 68 cases of testis cancer lung showed probable site of secondary metastasis enlightening role of avayav utpatti siddhant.
- For the 487 cases of tongue cancer, no organ showed significant incidence as probable secondary site.
- For the 47cases of urinary bladder cancer, Lung and liver showed probable site of secondary metastasis enlightening role of avayav utpatti siddhant.
- Hence we conclude that avayav utpatti siddhant mentioned by sushruta has significant role in the spreading the secondary metastasis.

Bibliography

- Shushrut samhita Hindi Vyakhya, Edited by Dr.Anantaram Sharma, Year 2009th edition, Published by Choukhamba Surbharti Prakashan, Varanasi.
- Charak Samhita, Edited by Vidyadhar Shukla & Prof.Ravidatta Tripathi, Year 2006th edition, Published by Choukhamba Surbharti prakashan, Varanasi.
- Astang Hridaya Hindi Vyakhya, Edited by Dr.Bramhananda Tripathi, Year 2007th edition, Published by Choukhamba Surbharti prakashan, Varanasi.
- Sushrut Samhita Dallhan Tika, Year 2010th edition, published by Choukhamba Surbharti prakashan, Varanasi.
- Sushrut Samhita Shareera Sthana, Edited by Dr.B.G.Ghanekar, Year 2006th edition, Published by Choukhamba Surbharti prakashan, Varanasi.
- Kashyap Samhita, Edited by Pandit Hemraj Sharma, Reprint Year 2012, Published by Choukhamba Sanskrit Sansthan, Varanasi.
- Sharangdhara Samhita, Edited by Dr Brahmanand Tripathi, Year 2012, published by Choukhamba Surbharti prakashan, Varanasi.
- Sarth Vagbhatt (Vagbhattkrut Astanghriday), Edited by Dr. Ganesh Krushna Garde, 2nd Edition, published by Choukhamba Surbharti Publication, Varanasi.

- Amarkosha, Edited by Shri Pandit Hargovind Shastri, Edition 1990, Published by Choukhamba Vidyabhavan Varanasi.
- Vaidyakiya Sabdasindhu, Edited by Kaviraj Umesh Chandra Gupta, Chaukambha orientalia Varanasi.
- Astang Sangraha (Indu virachit 'Sheelalekh'), Dr.Jyotimitra Acharya, Choukhamba Sanskrut Series of Varanasi.
- Human Anatomy (Vol-1, 2&3), Edited by B.D. Chaurasia, Year 2009, Published by CBS, Delhi.
- Cunningham's Manual of Practical Anatomy (Vol-1, 2&3), Edited by G.J Romanes, Year 1998 15th edition, Published by Oxford University Press.
- Gray's Anatomy (The anatomical Basis of clinical Practice), 39th edition, Published by Elsevier Churchill Living stone.
- Principles of Anatomy and Physiology, 10th edition, published by Tortora/Grabowski.