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A Study on Non Hodgkin Lymphoma in Ayurveda – A Case Study

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ABSTRACT

Lymphadenopathy is a disease of the lymph node in which they are abnormal in size, number or consistency. Description of lymphadenopathy or the use of similar term meaning lymphadenopathy or like diseases could not be found in Ayurvedic classics. But in context of many diseases like *Arbuda*, *Granthi*, *Apachi*, *Gandamala* etc. the same may be correlated. So, identification of lymphadenopathy like disorders in Ayurveda with respect to Cytomorphology is essential.

For the study, a certain case of lymphadenopathy was studied at Government Ayurvedic College, Guwahati-14. In the study the subjective parameters as per Ayurveda were collected in a specially designed proforma and the same was evaluated for Fine Needle Aspiration Cytology Study. The cytology study shows possibilities of Non Hodgkin Lymphoma which was later diagnosed by virtue of some clinical parameters mentioned in Ayurveda. Detailed description of the same will be presented in the paper.

KEYWORDS

Lymphadenopathy, Non Hodgkin Lymphoma, Fine Needle Aspiration Cytology.



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INTRODUCTION

Non hodgkin lymphoma are the malignant neoplasms of the immune system of the body and are more common than Hodgkin lymphoma. Non Hodgkin Lymphoma are more frequent in young adults. Majority of the Non Hodgkin Lymphoma arises in the lymph nodes (65%) while the remaining (35%) take origin in extranodal tissue. The incidence of these tumors increases with age. And the overall rate is increasing at about 3% per year. Non Hodgkin Lymphoma is one of the most common cancers in the united states accounting for about 4% of all cancers¹. Description of Lymphadenopathy or like diseases could not be found in Ayurvedic classics. But the same may be correlated in context of many diseases like

Arbuda, Granthi, Apachi, Gandamala etc. Owing to the gravity of the situation, an effective study on Non Hodgkin Lymphoma like disorders in Ayurveda is highly essential with the help of cytological study to give alternative treatment to the patients and to understand it in our way. Very less study has been carried out in this field. Some of the works that are available from some resources are-

- Arbuda –the concept of cancer in ayurveda.

- Cancer in Ayurveda- an approach in aetiopathogenesis
- Concept of Cancer in Ayurveda.

MATERIALS AND METHODS

The study was conducted on a certain case of Lymphadenopathy which was provisionally diagnosed as Non Hodgkin Lymphoma by F.N.A.C at Government Ayurvedic College and Hospital Guwahati, Assam as per necessary formalities under strict protocol. Special emphasis was given on history taking, general and systemic examination, FNAC examination etc and the parameters were noted in a specially designed proforma prepared for the study.

Case note:

A 40yrs old male, resident of Baihata Chariali, nearby Guwahati, Assam came to OPD of Roga Nidan, Government Ayurvedic College & Hospital with the complains of weight loss, multiple swelling all over body with cough and expectoration and increased perspiration. There was no history of fever, decreased appetite etc. No history of other co-morbid diseases and surgical interventions in the past were found. Familial and Treatment history were not significant.

On general examination of the patient the following informations were recorded- General condition was thin built, of weight



52 kg, BP -120/70mm Hg, P/R-72/min, R/R-26/min, Pallor, Icterus, Clubbing, Cyanosis, Oedema, Dehydration were examined and found absent. JVP was not raised. Systemic examination of Respiratory, Cardiovascular, CNS, GI System, Urogenital, Musculoskeletal system were carried out and no abnormality was detected.

Examination of Lymph node was carried out. On examination it was found that multiple swelling in Left Axillary, Bilateral Supraclavicular, Cervical and Inguinal lymph nodes were noted. Largest size being the inguinal, of size left 4x2.5 cm², right-3x2 cm², non tender, movable, firm in consistency. The surface of the lymph node was smooth and was of the same colour to that of the skin.

When the Ayurvedic methods of diagnosis were looked into for the diagnosis of the disease, the following findings were observed. The growth was *mahan* (large), *mamsa pinda* (solid growth), *bahubhi chagande* (multiple swelling), located in *kaksha, gala, bangshan*, having the same colour to that of skin (*ananya varna*), *unnata & bigrathita* (protruded & knotty swelling), *alpa ruja* (less pain), *apaka* (do not suppurate), *alparuja* (less pain), *chira bridhaya* (growing slowly).

In the same case, sample was taken for FNAC study. The procedure of Fine Needle Aspiration was explained to the patient in his own language including its reliability, limitation. Consent was taken for the same. Sample was collected under strict aseptic condition using needle size of 0.80x38mm/21x1 1/2 and a syringe. Smears prepared were air dried followed by M.G.G staining and were examined under microscope.

M.G.G Staining shows bimodal population of the lymphoid cells composed of centrocytes, centroblast, and small lymphocytes. Smear shows cells with irregular or cleaved nuclei, inconspicuous nucleoli, and a little cytoplasm, fig. 1 (a) (b) (c). Possibility of Non Hodgkin Lymphoma cannot be ruled out. Further an excision biopsy & Immunophenotyping was advised for final diagnosis.

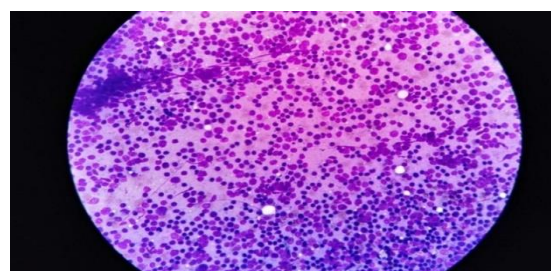


Figure 1 (a)

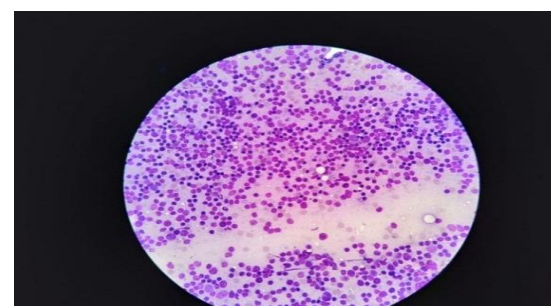


Figure 1 (b)

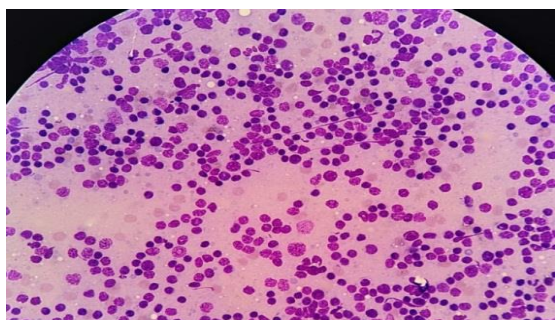


Figure 1 (c)

Figure. 1 (a), (b), (c): Images showing presence of centroblast, centrocytes & inconspicuous nucleoli

RESULTS AND DISCUSSION

The case was studied under some clinical Ayurvedic parameters mentioned in the classics for a differential diagnosis. The differential diagnosis were made among Arbuda, Gandamala, Apachi, Vidarika, Granthi, Pashangadarbh. For the same, different characters were plotted for each disease in the proforma and the highest ratio of the characters were observed to come up with a diagnosis.

- When the findings were plotted in the proforma prepared for the study, the highest ratio was observed in Granthi, owing to its classical characteristics mentioned as *vritta* (round), *unnata* (protruded), *bigrathita/ granthi grathana* (knotty), *sopha/swayathu* (swelling), *mahan* (large), *na arti* (painless) *snigdha* (unctuous), *chala* (movable)^{2,3,4}. Among this, 6 characters were found to be present out of 8 characters in this particular case, which was totally based on clinical assessment that were- *vritta*,

unnata, bigrathita, sopha, na arti, mahan.

So, finally the disease was diagnosed as Granthi as per Ayurveda.

- The FNAC study revealed bimodal population of Lymphoid cells. Lymphoid cells observed here are from a lymph node. Palpable lymph nodes can be considered as *mamsa dhatu* as per Ayurveda. The logic behind this is that similar diseases are mentioned in *mamsapradoshaja vikara*. In Ayurveda⁵ *mamsa utpatti* has been described as the action of *vayu, ambu, teja* alongwith *raktausmata, rakta* attains *sthirata* and is called as *mamsa dhatu*. Again while describing the *panchamahabhuta ansha of sharir*, *mamsa* has been considered as *parthiva ansha*⁶.
- Different generation of Lymphocytes in a lymph node can be considered as *mamsa dhatu* but they are of *apachit* form of *dhatu*. The logic behind the consideration of *apachit dhatu* is because centroblast & centrocytes are all immature type of lymphoid cells. There maximum appearance in a lymphoid tissue indicate the lack of proliferation of lymphoid cells. The possibility of *apachit dhatu* may be due to *dhatwagni manda* in the respective site. As we know that *agni* present in its own place has a portion itself in dhatus known as *dhatwagni*. Because of identical function, *dhatwagni* processes



the nutrients (*aahar rasa*) prepared by the *jatharagni* and transforms it, so as to become suitable to *dhatu*s. But when this *dhatwagni* becomes *tikshnagni* or *mandagni* causes *atipaak* & *apaak* of *dhatu*s resulting in *dhatu kshaya* & *dhatu vridhhi* respectively but in *vikrit abastha*⁷.

- Smear showed cells with irregular or cleaved nuclei, inconspicuous nucleoli and a little cytoplasm. The possibilities of the above findings may be due to involvement of *vata dosha* over the respective *dhatu*s. So after a *dosha dusya sammurchana* the lymphoid cells develops changes like irregular or cleaved nuclei, inconspicuous nucleoli, a little cytoplasm. This can be explained based on the following points. In Ayurvedic classics, it has been mentioned that *sharir avayava* is innumerable (*aparisankhya*) as like that of *parmanu*⁸. Here *parmanu* can be considered as the cells which is the functional unit of life. As like that of *parmanu*, it is *atibahutwad* (innumerable), *ati sauksmyatwad* (minute), *ati indriyatwad* (not visible by naked eye). The *samyoga* & *vibhaga* of this *parmanu* is due to the action of *vayu karma* & *swabhav*, hence it is possible that cellular proliferation is due to the action of *vayu*.

CONCLUSION

- In this case, which was clinically diagnosed as Granthi as per Ayurvedic

parameters, was later provisionally diagnosed as Non-hodgkin lymphoma as per FNAC study.

- Lymph nodes involved in the case can be considered as *apachit mamsa dhatu* due to *dhatwagni manda*.
- The cellular proliferation that is seen in cytomorphological study can be due to involvement of *vata dosha*.



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