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PERIPHERAL LYMPH GLANDS;

ARE WE JUSTIFIED IN TAKING THESE OUT FOR HISTOPATHOLOGY IN OUR PATIENTS?

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ABSTRACT... Background: Enlarged lymph glands almost always represent a local or systemic disease that may be benign or malignant. We see many patients including the referred ones in our OPD clinic and subsequently do the excision of quite a big proportion of the enlarged glands especially the cervical glands. **Study Design:** Descriptive study. **Setting:** Retrospect by reviewing the operative and histopathology department of King Edward Medical University. **Period:** April 2016 to April 2017. **Methods:** We will analyse the record of 121 patients who had peripheral lymph gland enlargement and presented to us. **Results:** Ours results show that the mean age of our patients was 25.03±18.06 years. We found that 40% of our patients had a definitive diagnosis from the histopathology of excised lymph nodes while 35.5% of the patients had reactive hyperplasia and 25% of the patients had inconclusive results and we were unable to help them. **Conclusion:** Our results conclude that the lymph nodes are a very good source of getting the diagnosis especially the cervical lymph nodes with a diagnostic yield of 76.4% and we may need to have a more robust criteria for excising the peripheral lymph glands in order to improve the diagnostic yield from 40%.

Key words: Lymph Node, Cervical, Axillary, Inguinal, Diagnostic Yield.

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INTRODUCTION

Lymph glands are the bean shaped organs that are present in human body in abundance. They are integral part of lymphatic system and act as one of the front line barrier against the infections.[1] In other words they are the filter houses or guardians of humans against the microorganisms. Their swelling is one of the major causes of our out patients' attendance. This may be due to a localized inflammatory process or a generalized disorder that may be infective or malignant in nature.[2] The most common cause of peripheral lymphadenopathy is tuberculosis in our country.[3] The other common causes include reactive hyperplasia, lympho-proliferative disorders and metastatic malignancies.[4] Many patients present in the out-patient department with the primary complaint of neck, groin or occasionally axillary swelling including patients from medicine and allied specialities. Owing to high diagnostic accuracy of FNAC ranging from above 87 % to 91%,[5,6] most of them get a diagnosis. Those who could not get a diagnosis owing to inadequate aspirate, haemorrhagic aspirate or poor fixation are advised to get a tissue diagnosis. This helps in reducing the time required to reach a diagnosis. The tissue biopsy after excision of the lymph gland is the most appropriate method to reach a conclusive diagnosis as recommended by literature.[7,8] Since we get a lot of patient to be diagnosed with the excision of the peripheral lymph glands so we have planned this study to review the record of our patients who underwent the excision of the gland in order to compare the diagnostic yield of the biopsy in the different peripheral lymph glands.

METHODS

This is a retrospective descriptive study which was conducted at the south surgical ward, Mayo

Hospital, Lahore and the Pathology Department of King Edward Medical University. The study period duration was one year from April 2016 to April 2017. The record of 121 patients with a mean age of 25.03±18.06 years was reviewed. These 121 patients had their peripheral lymph glands removed. Peripheral lymph glands in our study mean cervical, inguinal and axillary lymph nodes. 83(69%) of the patients presented directly to the surgical out-patient department and 38(31%) of the patients were referred from other specialities. After getting the history, examination and doing the necessary investigation and obtaining the informed consent all of these patients underwent excision of their lymph nodes. They were sent to the pathology department after fixation in formalin solution. The data was analysed using the SPSS version 20.

RESULTS

Out of these 121 patients, 62 (51.2%) were females and 59(48.8%) were males (Figure-1). If we look at the frequency of enlarged lymph nodes 99(81.8%) patients had enlarged cervical nodes and 16(13.2%) had inguinal and 6(5%) patients had axillary glands removed for diagnosis. Out of our 121 patients who had peripheral lymph node biopsy 40 % of the patients had a definitive diagnosis and 60% inconclusive results. When we look at the percentage of diagnosis in lymph nodes, 35.5% of the lymph nodes had reactive hyperplasia, 26% had granulomatous inflammation (tuberculous adenitis) and the third commonest diagnosis was lymphoprolifertive disorder around 12% (Table-I). A good number of patients around 25% had a lymph node biopsy with inconclusive results. Only a small percentage (2.5%) of patients had metastatic carcinoma in their lymph glands and all of these were the cervical nodes. Here if we review our results with respect to the gender of the patient, in our male patients the commonest diagnosis in the descending order were reactive hyperplasia, granulomatous lymphadenitis, lymphoproliferative disorder and metastatic carcinoma. The females had equal number of diagnosis for reactive hyperplasia and granulomatous adenitis while the proportion of inconclusive results in females was quite high and close to the other common diagnosis and this was even higher than the corresponding male population. (Figure-2)

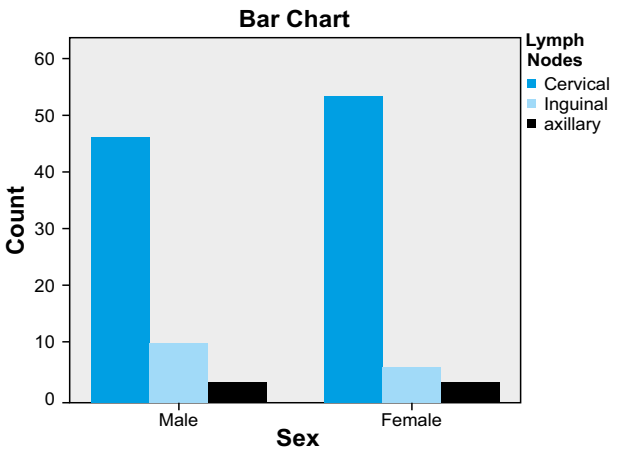

Figure-1. Sex distribution

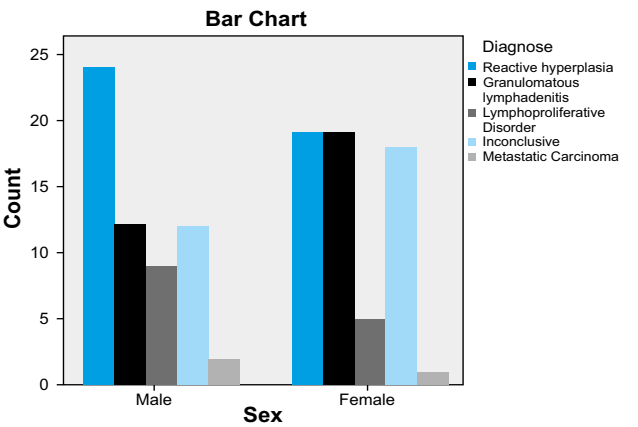

Figure-2. Sex based distribution of enlarged lymph nodes

		Diagnosis					Total
		Reactive hyperplasia	granulomatous lymphadenitis	Lymphoproliferative Disorder	Inconclusive	metastatic carcinoma	
Lymph nodes	Cervical	32	26	11	27	3	99
	Inguinal	10	2	2	2	0	16
	axillary	1	3	1	1	0	6
Total		43(35.5%)	31(26%)	14(12%)	30(25%)	3(2.5%)	121

Table-I. Differential diagnosis in regional lymph nodes

DISCUSSION

Enlarged lymph glands are a manifestation of a systemic disease or a problem elsewhere in the body. Most of the time this is the problem of younger age group of the patients as shown in our study by the mean age of 25.03±18.06 years as shown by Nigerian study where the most commonly affected population was around 40years of age[9] and a local study, conducted in Kashmir, showed the problem to be more common in the older patients whereas the younger patients group was in 3rd or 4th decade of life were the second most common affectees.[10] If we further our search for the age group in the local literature we find similar group to be having this problem and females are mostly affected.[11] We have also found female patients dominating our patient population around 51 %.[12] Our study shows reactive hyperplasia the commonest diagnosis and the tuberculous adenitis as the second common cause of the peripheral glands enlargementwhere as a study from Kashmir referenced above shows the reactive hyperplasia as the common diagnosis consistent with our findings.[10] Most of the regional and local literature shows tuberculous adenitis as the commonest diagnosis.[12,13] Another study from India shows the incidence of tuberculosis about 70% and the reactive hyperplasia to be 13%.[4,14,15] These local and international results favour the tuberculous adenitis as the most frequent cause of peripheral gland enlargement and the paucity of evidence in favour of reactive hyperplasia as the commonest diagnosis makes us consider the reason for this change or plan a further study to support our findings. Ourresults show that we were only able to help the patients and their clinicians in case of patients in 40 percent of the cases and the procedure did not have an outcomefor majority of the patients. The next important finding in our study was the cervical lymph node excision was fruitful in 40% of the caseswhere as in case of inguinal and axillary nodes, 25% and 66% was the diagnostic yield.Doberneck in his study on the diagnostic yield of the lymph node biopsy states 90% yield of the supraclavicular nodes while 76.4% for the cervical nodes. This is in support of our study with a high yield in the cervical nodes. This study also supports the diagnostic yields of our study for the axillary and inguinal lymph nodes quite closely as 67% and 37.5% Vs. 62.5% and 38.5% respectively[16] Here there is an apparent discrepancy between the cervical and axillary lymph gland yield but this can be explained as we excised only 6 patients' axillary nodes and found the definitive diagnosis in all of them where as we removed cervical nodes of 99 patients and found diagnosis in 40 % of the cases. When it comes to the inguinal nodes they gave us the definitive diagnosis in 25% of the cases. They had more common outcome as reactive hyperplasia in 62% of the cases and inconclusive report in 12.5% of the cases. On the basis of these findings and the literature evidence though old, we can recommend that cervical nodes as the most probable node for reaching a diagnosis when we encounter generalized lymphadenopathy. Moreover excision of these lymph nodes is easy and can be done under local anaesthesia in most of the cases. On the other hand the excision of axillary nodes demand a general anesthesia and a regional or local block can be suitable for the inguinal nodes in addition to the proper localization of the gland. The excision of an easily palpable node under local anesthesia is convenient both for the surgeon and patient and enhances compliance. The 60% inconclusive reports demand a more robust evaluation of the patient before excision of a peripheral lymph node for diagnosis in our department. This also calls for a more thorough evaluation of the patients by the referring colleagues as around one third of our patients were referred from other departments.

CONCLUSION

We may conclude that the peripheral lymph glands are a very good resource to reach a diagnosis in a difficult situation and among them the cervical nodes give the diagnosis in a much large proportion when multiple nodes are enlarged. We also need a more thorough evaluation of the patients before excising the peripheral lymph nodes so that we may avoid unnecessary surgical procedures and reduce the two departments extra workload

REFERENCES

1. Willard-Mack CL. **Normal Structure, Function, and Histology of Lymph Nodes.** Toxicologic Pathology. 2006;34(5):409-24.

2. Leung AK, Davies HD. **Cervical lymphadenitis: etiology, diagnosis, and management.** Current infectious disease reports. 2009;11(3):183-9.

3. Ahmed I, Hashmi S, Tanwir F, Ahmed S. **Tuberculosis and Cervical Lymphadenopathy-A study of 175 cases in a Tertiary Care Hospital.** Journal of Oral Hygiene & Health. 2013:1-3.

4. Iqbal M, Subhan A, Aslam A. **Frequency of tuberculosis in cervical lymphadenopathy.** Journal of Surgery Pakistan (International). 2010;15(2):107-09.

5. Ahn D, Kim H, Sohn JH, Choi JH, Na KJ. **Surgeon-performed ultrasound-guided fine-needle aspiration cytology of head and neck mass lesions: sampling adequacy and diagnostic accuracy.** Annals of surgical oncology. 2015;22(4):1360-5.

6. Rajbhandari M, Dhakal P, Shrestha S, Sharma S, Shrestha S, Pokharel M, et al. **The correlation between fine needle aspiration cytology and histopathology of head and neck lesions in Kathmandu University Hospital.** Kathmandu University medical journal (KUMJ). 2013;11(44):296-9.

7. Kilicarslan A, Dogan M, Sungu N, Karakok E, Karabekmez L, Akyol M, et al. **Can Cutting-Needle Biopsy Be an Alternative to Excisional Biopsy in Lymph Node Pathologies?** Turk patoloji dergisi. 2017.

8. Newcombe JF. **Tuberculous cervical lymphadenopathy.** Postgraduate Medical Journal. 1971;47(553):713-7.

9. Olu-Eddo AN, Ohanaka CE. **Peripheral lymphadenopathy in Nigerian adults.** Journal-Pakistan Medical Association. 2006;56(9):405.

10. Qadri SK, Hamdani NH, Shah P, Lone MI, Baba KM. **Profile of lymphadenopathy in Kashmir valley: a cytological study. Asian Pacific Journal of Cancer Prevention.** 2012;13(8):3621-5.

11. Ahmed N, Israr S, Ashraf MS. **Comparison of fine needle aspiration cytology (FNAC) and excision biopsy in the diagnosis of cervical lymphadenopathy.** Pak J Surg. 2009;25:72-5.

12. Fatima S, Arshad S, Ahmed Z, Hasan SH. **Spectrum of cytological findings in patients with neck lymphadenopathy-experience in a tertiary care hospital in Pakistan.** Asian Pac J Cancer Prev. 2011;12(7):1873-5.

13. Maheshwari A, Padhy RK, Dash BK. **Aclinicopathological study of cervical lymphadenopathy.** Journal of Evolution of Medical and Dental Sciences-JEMDS. 2015;4(20):3497-507.

14. Bhagat V, Shah P, Ch, Patel n. **Frequency of tuberculosis in cervical lymphadenopathy. I**nt J Med Sci Public Health. 2016;5(4):666-70.

15. Badge S, Ovhal A, Azad K, Meshram A. **Study of fine-needle aspiration cytology of lymph node in rural area of Bastar District, Chhattisgarh.** Medical Journal of Dr DY Patil University. 2017;10(2):143-8.

16. Doberneck RC. **The diagnostic yield of lymph node biopsy. Archives of Surgery.** 1983;118(10):1203-5.

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