Original Research Paper

Volume - 11 | Issue - 09 | September - 2021 | PRINT ISSN No. 2249 - 555X | DOI : 10.36106/ijar

Pathology

CLINICO HISTOPATHOLOGICAL CORRELATION IN LEPROSY IN A TERTIARY HEALTH CARE CENTRE-A RETROSPECTIVE STUDY

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ABSTRACT Leprosy is one of the oldest disease known . Despite advances in detection modalities in medical science, Leprosy continues to be a public health challenge in a developing country like India. Early detection of new cases and new contacts is essential to prevent future disabilities andfinancial burden on both patient & the government. Though diagnosis of leprosy is based on different clinical presentations,it's the histopathological examination which gives confirmatory diagnosis.

Aims and objective: To study the clinicohistological correlation in leprosy.

Results: Of the 100 suspected cases of leprosy which were biopsied,the clinical diagnosis was TT in 18 cases,BT in 40.cases ,BB in 5.cases,BL 12 cases, LL in 15 cases and indeterminate in 10 cases. Of the 100 cases which were biopsied only 74% showed histological features consistent with any type of leprosy.The overall clinicohistological correlation was 74percent.On correlating clinical pattern and histopatholigical pattern it was found that maximum correlation was seen with LL (86%),followed by BL(70%),BT(62%),TT(56%),IL(50%)and last was BB(49%).

Conclusion: Since there was some degree of overlap in different types of leprosy especially the unstable forms, The correlation can be made more accurate by combining clinical and histopathological features.

KEYWORDS :

Introduction

Leprosy is one Of the oldest disease known to man.Its a chronic infectious disease caused by Mycobacterium .leprae. Leprosy expresses itself in different clinico –Pathological forms which include two well defined stable and opposite poles(Lepramatous and Tuberculoid) and two unstable poles(Indeterminate and dimorphic)[1]. Despite of advances in technology in medical science diagnosis of leprosy continues to be a public health challenge in country like India because of various stigma and taboos attached with this infectious disease.Early detection of the patients infected with acid fast bacilli is important to prevent future disabilities. With the advent of multidrug therapies,immunotherapies this disease can be cured far before it leads to physical incapacity. Diagnosis of leprosy is based on different clinical presentations which involve detailed history of the patient,examination of skin lesions and peripheral nerves [2].Grossly leprosy patients can be divided into Tuberculosis tuberculoid (TT), Borderline tuberculoid (BT), Borderline borderline (BB), Borderline lepramatous(BL), Lepramatous lepramatous(LL) [3]Though clinical appearances give gross diagnosis of the patient ,it's the Histopathological diagnosis which takes into account not only the presence of acid fast bacillus in the tissue but also various associated immunological reactions thus confirming the precise type of lesion.The present study was undertaken to study the clinicohistological correlation of leprosy.

Aims and objectives

To study the clinicohistological correlation in leprosy Patients.

Materials and methods

A retrospective study of 100 clinically suspected cases of leprosy was done over a period of two years from January2017 to December2018 in the department of pathology Govt medical college, jammu.Inclusion criteria included all cases which were biopsied In these two years . The clinical and Histopathological datas collected were correlated. Data collected was presented in number and percentages and analysed in Microsoft excel.

Results

Out of 100 cases studied 73 were males and 27 females.The age range from 15 years to 75years.Out of the 100 suspected cases of leprosy which were biopsied,the clinical diagnosis was TT in 18(18%),BT in 40(40%),BB in 5(5%),BL in 12(12%),Indeterminatein10(10%) and LL in 15(15%).Of the 100 cases which were biopsied, only 74(74%) showed histological features consistent with any one type of leprosy. The overall clinicohistological correlation was 74 percent. Comparing the histopathological pattern with that of clinical pattern,the maximum correlation was seen with LL(86%),followed by BL(70%),BT (62%),TT(56%),IL(50%) and BB(49%).

Discussion

In the present study the leprosy was classified clinically and histological into different types based on the criteria devised by Shivaswamy KN.et al[4].Out of 100 clinically suspected cases of leprosy,biopsy showed features consistent with a particular subtypein 74 patients.With an overall clinicohistological concordance of 74 %.This finding in our study is consistent with findings of many other similar studies.Though the classification of leprosy is mostly basedon Ridley-Jopling classification, even then discordance between Histopathological and clinical presentation was noticed because clinical classification based on Ridley-Jopling was done even when a Histopathological examination had not been done[5].In our study the clinicohistological correlation was maximum with LL(86%), followed by BL(70%),BT(62%),TT(56%) and IL(50%).This is similar with the results of study conducted by Sharma etal[6].In addition to LL, high correlation was also noted with other stable pole TT, as was found in study done by Kalla G etal[7]. Histological stability of the disease may be the reason for better correlation in these two subtypes. In our study concordance was better in BT and BL rather than with TT,although they were unstable.Same observations were made by Moorthy et al[8].In our study lowest number of cases detected were of BB subtype.Similar results were seen with Kar PK et al[9].In the present study IL showed 50% correlation whereas correlation showed ranged from 20% in studies done by Moorthy etal[8] to 100 % by Sharma etal[6].The reason can be immunological status in IL that is yet to be determined, as it is early and transitory stage and may progress to any of sub types. Moreover its diagnosis depends on many factors likedepth of biopsy,quality of sections etc.In our study nonspecific histological changes were seen in 20 % of cases which is on par with study done by Singhi MK etal[10]. As the clinician make diagnosis way before histological results come this can be the important reason of discordance between clinical and Histopathological diagnosis.Moreover the results in various studies may also vary because ofdifferent sites chosen for biopsy and associated immunological status of the individual.

Conclusion

Since there is some degree of overlap in different subtypes of leprosy, more so in unstable forms It's best exercise to make a Histopathological correlation, so that the accurate diagnosis be made and best possible treatment can be given to the patients.

Table 1. Clinical distribution of leprosy cases

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