ORIGINAL ARTICLE

OPEN BIOPSY FOR CERVICAL NODE TUBERCULOSIS IS STILL A NEED IN OUR SET UP

Abdur Rehman Anwar[1], Hamidur Rehman[1], Arif Raza Khan[2], Kasifud Din Khattak[1], Murad Ali[1], Anwar Shamim[1]

[1]Department of ENT, Gaju Khan Medical College, Swabi - Pakistan

[2]Department of ENT, Khyber Medical College, Peshawar - Pakistan

ABSTRACT

Objectives: To assess that open biopsy is mandatory for diagnosing cervical node tuberculosis.

Material and Method: The study was conducted at DHQ Hospital, Swabi over 2 years period from January 2013 to December 2014. Fourteen cases of cervical lymph node tuberculosis were confirmed histological by open biopsy. All were treated with anti tuberculous as category I patients and were treated with Six months ATT with two months intensive and four months continuation phase under Directly Observed Treatment Short course (DOTS).

Results: Fourteen cases including twelve female and two male with age range from 2 years to 60 years were diagnosed as TB cervical lymph nodes. 5 patients (35.7%) presented with matted nodes, 4 cases presented with Cold abscess(28.5%), discrete node in 3 cases (21.4%) and Bil node in 2 cases (14.2%). Associated constitutional signs symptoms were fever(64.2%), weight loss (57.14%), Poor appetite and anemia (50% each) and raised ESR in 71.4%.

Conclusion: Open biopsy is still advisable for diagnosis of cervical node tuberculosis

Key Word: Cervical, lymph node tuberculosis.

This article may be cited as: Anwar AR, Rehman H, Khan AR, Khattak KD, Ali M, Shamim A. Open biopsy for cervical node tuberculosis is still a need in our set up. J Med Sci 2016; 24: (2) 69-72.

INTRODUCTION

Tuberculosis (TB) is an ancient disease and it is evident from reports that it existed 14000 years ago. It is caused by mycobacterium tuberculosis which survive in dry condition for longer time. In 2004 tuberculosis is declared as global emergency and is an important component of millennium development goal (MDG). Almost 90% of world population is infected with TB organism but major group remains latent, and it becomes clinically evident when immunity deteriorates. Nine million new TB cases develop every year and 2 million die annually[1,2]. More than 90% death occur in developing countries. It is second major killer to HIV and affects most economically productive age group (15-45yrs). Pakistan ranks eighth among the countries with highest disease incidence and contribute 55% of disease burden in the Eastern Mediterranean region. There are about 3 lacs new cases each year in Pakistan.

Infection spreads through droplet from person to person. Active disease person can infect ten healthy persons in a year. Tuberculosis is a systemic disease and can attack any tissue of the body. The most common tissue affected is lung and is called Pulmonary Tuberculosis while tissue affected other than lung is Extra pulmonary. The common extra pulmonary tissue affected are pleura, brain and meninges, bone and lymphatic. Tuberculous lymphadenitis is common entity amongst extra pulmonary tuberculosis and cervical lymph node tuberculosis is one of the most common differential diagnosis of cervical node enlargement[3,4]. Most common symptom of pulmonary tuberculosis is persistent cough and blood stained expectoration. Fever, night sweat, and weight loss are common symptoms of pulmonary as well as extra pulmonary tuberculosis. Sputum smear examination is diagnostic test for pulmonary tuberculosis while tissue histopathology with evidence of caseating granuloma are diagnostic of extra pulmonary tuberculosis particularly cervical node TB[5,6]. and excisional biopsy is recommended when feasible. The possible exception is when the di-

Abdur Rehman Anwar (Corresponding Author)
Assistant Professor
Department of ENT, Gaju Khan Medical College,
Swabi - Pakistan
Cell: 0300-908-4722
Email: drabdurrehmananwar@yahoo.com
Date Received: April, 01, 2016
Date Revised: March 04, 2016
Date Accepted: May 06, 2016

agnosis of tuberculosis is suggested by constitutional symptoms,characteristic chest x-ray findings, a positive PPD skin test and positive culture of mycobacterium tuberculosis from another source such as sputum or gastric washings. Surgery is therefore, reserved for excisional biopsy to establish the diagnosis if systematic disease is not suspected and also for the removal of grossly enlarged nodes[7,8]. Incisional biopsy should be avoided if possible, as it can result in the formation of fistulous tracts.The DOTS (Directly Observed Treatment Short Course Therapy) is the treatment strategy recommended by WHO[9]. Anti TB drugs Rifampicin, Isoniazid, Pyrazinamide and Ethambutol are given in fixed combination recommended by WHO. Dose is calculated according to the weight of the patient and recommended therapy is six months with two months intensive phase and four months continuation phase.

MATERIAL AND METHODS

Study was conducted in DHQ hospital, Swabi during a two years period from January 2013 to December 2014. Cases of cervical tuberculosis confirmed histologically were included in study with exclusion criteria of non-tuberculous lymphadenopathy. Both male and female of all age group were included in study. Age group ranged from 2 to 60yrs(graph 1). In majority of our patients who present to our specialty with cervical lump or lymph node enlargement, we performed either excisional or incisional biopsy under local or general anesthesia, depending upon presentation of mass or fitness of patient. In clinically suspected metastasis we do examination of upper aero digestive tract as well. Biopsy tissue were sent to more reliable histopathologists. Out of all cervical node's biopsies done, fourteen cases (Table 1) were reported having confirmed lymph node tuberculosis during this period and completed a six month scheduled anti tuberculous therapy. Fixed drug combination treatment was given with combination of four drugs i.e. Rifampicin, Isoniazid, Pyrazinamide and ethambutol (R=150mg, H=75mg, Z= 400mg,E 275mg) in intensive phase for two month and two drugs combination i.e. Rifampicin and Isoniazid(150mg+75mg) for four months in continuation phase. Dose of drug was adjusted according to age of patient. All patients completed anti TB therapy through DOTS (Directly Observed Treatment Short course).Drugs were provided by district TB office on monthly basis. Follow up was carried out through assessment of weight gain, loss of fever, improvement in ESR and general wellbeing of patient.

The data of each patient was recorded in TB01 (TB treatment card) which contain all general information of patient i.e. name, age, sex, weight, address, contact no etc and treatment schedule (fig 1). At the same time this information is registered in TB 03 register while patient was given TB 02 card (it shows general information of patient given in TB 01 as well as drug and treatment information).

RESULTS

We covered patients of cervical lymph node tuberculosis as component of extra pulmonary tuberculosis in collaboration with district TB control office. During two years period, 1393 TB cases were registered of which 659 were male and 734 were female. 271(19.45%) cases were extra pulmonary. We added fourteen cases of servical lymph node Tuberculosis to extra pulmonary bulk which counted 5% of extra pulmonary cases twelve cases were female and two male with age range from 2 to 60years. The incidence of both pulmonary and extra pulmonary was more common in age group 15 to 24 years(18% of Total). Our patients presented with enlarged cervical node either matted (35.7%), cold abscess(28.5%),discrete node (21.4%),Bi lateral nodes (14.2%). Cold abscess was commonly noted in supra clavicular region while matted mass was noted in deep group of nodes. The constitutional symptoms and signs noted were fever in 9 cases(64.2%), weight loss in 8 cases(57.14%), poor apitite and anemia in seven cases each (50% each). Body aches and pains were noted in four cases (28.5%). Four patients coincidently had pulmonary tuberculosis as well two of which already had completed ATT for Cock,s lesion while two other developed cervical lesion during treatment. Except one Afghan patient who shifted to Afghanistan during continuation phase all other completed six months therapy and were declared as treatment complete cases.

DISCUSSION

Tuberculosis is one of the world wide occuring infectious disease spread by contact carrying high morbidity and mortality and is declared by WHO as global emergency. World Health Organization has taken tuberculosis control on top priorities and particular attention is given to Asian and African countries. Pakistan is one amongst the countries having high prevalence of the disease and particular attention is given with stress on case detection, contacts screening and vigilant treatment through DOTS (Directly Observed Treatment Short course). Pulmonary tuberculosis has got high incidence and prevalence and it is these cases who are great threat to community as one untreated case can infect 10 healthy persons during one year In resource poor countries like Pakistan and India which are TB endemic zones, TB should be first line diagnosis in all cervical node enlargements unless proved otherwise[10]. Before starting anti TB therapy close monitoring and excision

biopsy is mandatory[11,12]. Interestingly out of our 13 cases 11 were female and only two were males the age rang was 2yrs to 60yrs.weiler and nelly et al[11] reported 21 cases in 10yrs period of age range from 4 to 79 years and Mert et al[12] reported 2 and 1/2 time more common incidence in females. Cervical nodes TB is usually isolated but might occur coincidently along with pulmonary tuberculosis while in HIV/AIDS cases it remains the first extrapulmonary determination and rather more common than lymphoma, Kaposi sarcoma and generalised lymphadenopathy of HIV[14]. 4 of our patients had history of pulmonary tuberculosis two of which had already completed ATT and two developed cervical lymphadenopathy during treatment for pulmonary lesion they responded to chemotherapy. P.R. Gupta[15] in his study suggested management plan and concluded that most of nodes that enlarge during therapy will ultimately respond to treatment. The diagnosis of pulmonary TB is made by non-invasive procedure is by sputum smear examination and x ray chest and same are tools and yard sticks for detecting prognosis. The diagnostic and prognostic evaluation is different in case of extra pulmonary tuberculosis. Most of the time diagnosis is delayed as initially disease remains silent neither noted by patient nor noticed by health care provider. More over diagnostic tests are invasive and cost effective[16,17]. Under instructions of WHO Pakistan, TB control program do not recommend anti TB therapy unless confirmed diagnosis either by sputum smear positivity or histopathology depending either pulmonary or extra pulmonary. In our set up FNAC reporting is getting more reliable however experts in field are not available easily and still there is poor communication and exchange of views and experties between surgeon and reporting pathologist. In our cases the diagnosis was made on basis of history with patient presenting with neck mass either discrete node,matted nodes,lump or absess with constitutional symptoms and signs like fever, weight loss poor appetite, anaemia aches and pains and raised ESR and confirmed with open biopsy excisional or incisional under general or local anaesthesia depending upon general condition of patient Prognostic improvement was assessed from general well-being of patient, disappearance of fever, improvement in ESR and weight gain. BC jha[18] reported in his study presentation of patients with neck swelling in 95%, malaise in18%, fever in 10% and weight loss in10% with general welbeing weight gain and ESR dropping to normal with 6 months ATT. In their study Mert et al[19] noted clinical improvement in three months and ESR dropt to normal with in 5 months after start of ATT. Interferon Gamma Release Assays (IGRAs) is a new diagnostic and prognostic technology for extra pulmonary and hidden tuberculosis which is considered to be more sensitive and specific. Of course it is wonderful improvement and success in management of extra pulmonary tuberculosis but yet at experimental stages and not widely in practice. The test is based on progress in genomic analysis of mycobacterium and discovery of antigens ESAT_6 and CFP_10 which induce strong interferon gamma (INF_gamma) from sensitized T cell[20,21].

CONCLUSION

For proper diagnosis and excellent management of cervical tuberculosis, it is advisable to have open biopsy done for enlarged lymph nodes.

REFERENCES

1. Irene G-Sia MD, Mark L. Extrapulmonary tuberclosis; Are statistical reportes accurate? Ther Adv Dis, 2014; 2(2) 61-70.
2. Ekaterina Kucharenya. and role of surger. VOL 45,No 6 :2014; 1419-24.
3. Heather M Peto ,Robert H ,Theresa A ,Philip A ,Lori R. Oxford journal Clinical Infectious diseases vol 49(9):1350-57.
4. KAMDOL KANJANODAS, NARUMON, SIRIDAN Tuberculosis urvical kyonphadenopatty Weiland MP. Current concepts in the management of tuberculosis. Mayo clinic Pm 2011,April 86(4):348-61.
5. Gupta AK .Nayar, M. ,Chandra M etal Critical appraisal of fine needle aspiration cytology in tuberculous lymphadinitis Acta cytol 1992; 36: 391-94.
6. Shiba Niclakantan , Preebi Pnain , Roby E Emmanual KAVITA Agamal. Diversities in presentation of Extrapulmonary tuberculoses BMJ case Report 2013 , doi : 10.1136/bvc 2013-008597.
7. Golden MP,Wikram HR,Extrapulmonary tuberculosis:an over view. AM fam physician: 2005,72(9) 1761-68.
8. Subramhmanyam M, role of surgery and chemotherapy for peripheral lymph node tuberclosis Brj surgery 1993; 80(12): 1547-48.
9. Jawahar MS, Sivabramain, S, Vijayan VJ etc. short course chemotherapy for lymphadinitis in children Br Med J 1990; 301: 359.
10. Sharma SK. Mohan, A; Extrapulmonary tuberculosis,Indian JMedRes 2004,120(4); 316-53 Kampol Kanjanopas, Naruman, Siripan,
11. Weiler Z, Nelly P, Barchin AM, Orens. Diagnosis and treatment of tuberculous lymphadinitis; J oral maxillofacial surgery 2000 May; 58(J): 477-81.
12. Cheung WL, SIV KF Tuberculous cervical abseers comparing the results of total excision against simple incision and drainage BrJsurg 1988; 75, 563-64.
13. Dandapat MC, Mishra BM Dash SP, KAR KP, Peripheral lymph node tuberculosis;a review of 80 cases Brj surg,1990, 77(8) 911-12.

14. Bem, C Human immune deficiency virus positive tuberculous lymphadenitis in central Asia; clinical presentation of 157 cases int J Tubercle Lung Dis 1997; 1: 215-19

15. PR Gupta. Difficulties in managing lymph node tuberculosis. Lung India 2004; 21: 50-53.

16. Abdul Haque Khan, Atif sitwet Hayat, Ghulam Hussain Mukhtiar Hussain, Majeed A Sumroo. Study on the role of fine needle aspiration cytology the cervical lymph adonopathy world applied sciences journel 12(11); 1951-1954: 2011.

17. Finfer M,Prechik A,Burstein DE Fine needle aspiration biopsy diagnosis of tuberculous lymphadmitis in patient with and with out the acquired immunodeficiency syndrome Acta cytol 1991; 35: 325-32.

18. BC the Adass, NM Nagarkar, R Gupta, S Singhai Cervical tuberculoses lynph adenopathy changing clinical pattern and concepts in managul Postgrad Med 2001; 77: 185-87.

19. Mert, A. Tabak F. Ozaras-R. Tahan V. Tuberculous lymhopathy in adults review of 35 cases. Acta chir Belg 2002 April; 102(2): 118-21.

20. Hooperce. Lee Yc. Mashkell NA. Interferon-Gamma release essay for the diagnosis of TB pleural effusion, hype or hopepul Med 2009 July; 15(4): 358-65.

21. Shin JA. Chang YS. Kim, HJ. Byun, MK Diagnostic libiality if interferon gamma release assay in extrapulmonary tuberculosis; Diagn Microbiol Infec Dis 2015 may 82(1) 44-58.

CONFLICT OF INTEREST: Authors declare no conflict of interest

GRANT SUPPORT AND FINANCIAL DISCLOSURE NIL

AUTHOR'S CONTRIBUTION

Following authors have made substantial contributions to the manuscript as under:

Anwar AR: Main idea.

Rehman H: Data collection.

Khan AR: Critical review of the whole article.

Khattak KD: Follow up.

Ali M: Bibliopgraphy.

Shamim A: Statistics

Authors agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.