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NEUROCYSTICERCOSIS:- AN UNFORGETTABLE PAST ; A CLINICAL REVIEW

Medicine

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ABSTRACT

Cysticercosis,caused by Taenia Solium larva is an important public health issue mainly in the developing world,while neurocysticercosis(NCC) is thought to be the most common parasitic manifestation of the central nervous system.After the invention of newer radioimaging technique it has been found that NCC is one of the most common cause for acquired epilepsy.

INTRODUCTION:-Cysticercosis caused by larval stage of the tapeworm,Taenia Solium is a concerned public health problem both in resource poor as well as western developed countries.NCC being the most common CNS parasitic infestation leading to epilepsy in the developing countries including South and central America,India,South-East Asia,China and sub Saharan Africa.Three quarter of the estimated 50million people with epilepsy live in underdeveloped or developing countries of the world and up to 94% of them remain untreatred.

Humans are the only definitive host of T.Solium.Adult tapeworm remains in the intestine of the human being and this condition is known as taeniasis.Both human and pig act as an intermediate host and harbor T.Solium larvae in different internal organs,this condition is referred as cysticercosis, while infestation in the CNS is specifically called as neuroicysticercosis.Human and pig both acquire cysticercosis through ingestion of eggs excreated in the faeces of human carrier.T.Solium infection has been on the increase in the western affluent countries because of human migration from and travel to the endemic areas.The disease is prevalent in those societies where the pigs are allowed to roam freely,the residents consume undercooked pork and the basic sanitary facilities are lacking.

AIMS AND OBJECTIVE:-J.L.N.Medical college Bhagalpur is a teaching hospital and extends its medical facilities to different districts of Bihar and adjoining states of Jharkhand and West Bengal.These patients presented with features of different types of epilepsy,nonspecific headache.All these cases were subjected for CT scan brain for the presence of NCC.The aim was to have a first hand information regarding the incidence of NCC among patients attending hospitral and who got their CT brain done.

METHODS :-From January 2016 to November2016 the CT scan brain done in this hospital were studied and it was found that a total of 70 cases were CT proved NCC.ELISA for the detection of cysticercosis was implied and the diagnosis was confirmedThese patients were teated with full course of albendazole(15mgm/kg/day in two divided doses) for 28days.Along with this they were also given steroids prednisolone 30-60mgm/day for a period of 7 to 10days in a decreasing dose along with the start of albendazole therapy.Those case who presented with epilepsy were treated with anti convulsant drugs to be taken for a period of 3years from the start of the anti convulsant therapy.

After the full course treatment with albendazole these patients were again subjected for CT scan brain and it was found that in over 98% of the cases of proved NCC there was complete calcification of the lesion denoting eradication of the disease.

RESULT:-Retrospective study of CT scan brain and later confirmed by ELISA it is very clear that till today when the living standard of people is improving day by day,sanitary facilities are being improved ,the incidence of NCC is quite alarming.In 11months of study of CT scan brain there are 70 proven cases of NCC,which after receiving adequate treatment has improved.This indicates that still today the basic needs for proper cooking ,safe disposal of excreta,maintenance of personal hygiene shoul be taken care of for common person in general while special among slum dwellers.

DISCUSSION:-Cysticercosis was first described in pigs by Aristophanes and Aristotle in 3rd century BC.Later it was found in human by Parunoli in1550.Cysticercosis has also been described in ancient Indian Medical book,the Charak Sanhita.NCC was first described in a coolie from Madras who died due to seizure.On autopsy it was found that he was infected with cysticercosis.In 1912 Krishnaswamy reported cysticerci related cases of muscle pain and subcutaneous nodule with numerous cysticerci in the muscles,heart and brain at autopsy.In 1934 their was higher incidence of NCC related epilepsy among the British Army deployed in India.Tapeworm is endemic in many parts of the world including Latin America,China,Southeast Asia,India, and sub Saharan Africa.Literature suggests that the prevalence of cysticercosis in Mexico is between 3.1 to 3.9%.A seroprevalence as high as 20% in humans and 37% pigs has been reported in areas of Guatemala,Bolivia,and Peru. The prevalence and incidence of cysticercosis has considerably decreased in developed countries by impling strict meat and eat inspection,better personal hygiene and improving sanitary facilities.In Latin America around 75 million live in endemic areas and 400,000 people have symptomatic disease.In the United States the disease is found in immigrants from Mexico,central and South America.

The disease is prevalent in all states of India.The incidence of cysticercisis is low in Jammu and Kashmir because of majority of muslim population there. In Kerala because of high literacy rate,education, awareness and adequate personal hygiene standard the incidence here also is low.NIMHANS,Bangalore reported 2% incidence of NCC among unselected series of epilepsy patients.In a study from New Delhi NCC was reported in 2.5% of all the intracranial space occupying lesions.The solitary form of the disease(solitary cysticercosis granuloma SCG) is the commonest presentation reported in nearly two- thirds of all the patients of NCC.Between 26 to 50% of all Indian patients presenting with partial seizures had SCG on routine CT scan of the brain.It is very strange but interesting to note that 95% of all the cases of NCC in India are vegetarians.Cysticercosis is highly prevalent in Bihar,Orissa,Uttar Pradesh and Punjab.

SUMMARY:- With the living standard of common masses is improving day by day the present scenario of cysticercosis in a matter of concern.There are many measures still to be taken care of for all those down trodden slum dwellers,where the incidence of cysticercosis is very high.Cysticercosis has been recognized as a potentially eradicable disease,The measures taken in the developed countries to control is the eradication of swine cysticercosis through improved animal husbandry and meat inspection procedures.This noble approach has resulted in drastically reduced incidence of intestinal infestation of T.Solium in the United States and Western Europe.Tape worm carriers are the good target for the control of cysticercosis taeniasis.A small number of persons with tapeworm infestation may infect large number of healthy individuals in the

society.In the developing countries emphasis has been placed on the control of the parasite through health education and mass administration of antihelminthic drugs regularly in the endemic areas in an attempt to treat the tapeworm carriers.

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