A REVIEW OF CYSTICERCOSIS CELLULOSAE WITH TWO CASE REPORTS

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Cysticercosis is an uncommon clinical entity with protean manifestations depending upon the organ involved and punctuated with periods of exacerbations. At times the cysticerci may remain silent and symptomless throughout life. The dermatologist is to diagnose the subcutaneous nodule and rule out the involvement of other organs at the earliest.

REVIEW OF LITERATURE

Cysticercosis has been recognised as a causative factor for epilepsy like symptoms since times immemorial. Ramler described a case in 1558 and in 1650. Paracelsus came to the conclusion that the epileptic fits of his patients were due to this condition.

MacArthur, Dixon & Smithers and Dixon & Hargraves were the first to present the the most extensive series of of 284 cases in 1944 and got the cysticercosis an important place among the conditions causing epilepsy. In Dixon & Hargraves series 93 6% cases were diagnosed by biopsy of cyst, biopsy & radiography and radiography alone, all put together, and 66.2% cases were diagnosed by radiography alone. Out of their series 6.6% cases had never shown any symptoms whatsoever. In their series, 11% of patients showed cerebral cysticercosis. These authors did not consider the prognosis of cysticercosis to be too bad, because in their series only 9,15% patients died of cysticercosis. Only 10% of their cases had shown eosinophilia and not much importance was attached to it by them. C. S. F. findings did not show any marked positive diagnostic sign.

Contrary to the earlier belief that this condition is exclusively prevalent in India, a review of recent literature reveals that cases have been reported from Russia, China, Spain, Mexico and South America, Bulgaria, etc. This clearly sets forth the point that cysticercosis is of almost universal distribution. The initial extensive report showed that the cases were mainly distributed to Lucknow, Secundrabad, Ambala, Bareilli, Jabalpur, Kanpur, Meerut, Fyzabad, Allahabad and Ferozpur. But this was perhaps accerding to the main stations of army at that time from where the cases were taken, but now cases have been reported from all over India. It is now a well established fact that the prevalence of cysticercosis depends upon insanitory human faecal disposal and the eating of incompletely cooked pork and raw vegetables.

Sainani and Saoji reported a case of cerebral cysticercosis with subcutaneous nodules in 1964, where a patient had developed varied neurological features, such as attacks of giddiness, epilepsy, menigitis like features and diplopia

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during the period of nine months observation. Patient showed significant eosinophilia and calcification in brain and soft tissues.

Vakil and Sirsat reported six cases of solitary cysticercosis in the same year. D. Bhaskar and Reddy reported post-mortem findings of cerebral cysticercosis which had remained silent all along life.

C. Prakash & Anil Kumar have reported a case of cysticercosis in a vegetarian boy with profuse muscular swelling of calf-muscels and E. C. G. changes.

LIFE CYCLE AND MODE OF INFECTION OF TAENIA-SOLIUM

In the normal course of events the man is the definitive host and pig, an intermediate host, but cysticercosis cellulosae results form a systemic form of infection with the larvae of the pork tapeworm. Man gets infected either by drinking contaminated water or by eating uncooked, infected vegetables and pork-meat. Besides this, a man harbouring the adult worm may auto-infect himself either from contaminated hands owing to unclean habits or by reversal of peristaltic movements of the intestine where by the gravid segments are thrown back to the stomach.

Thus through haematogenous spread cysticerci may develop in any organ and the effects produced depend entirely on their location. Cysticerci may be present in all the organs together, and may reveal the symptomatology pertaining to all, or to some of them or a single one only. The cases are on record with kelidoscopic pattern like symptoms. The distribution of these cysticerci is frequently in the subcutaneous tissues and muscles, occassionally in the brain and lungs and rarely in the eyes. These cysts are usally multiple and have tendency to become calcified and obsolete in the course of 3-6 years revealing only on radiographic examination

CASE REPORTS

Case No. 1. T. C., a 25 year Hindu male, a sweeper by profession and resident of District Jind (Haryana) reported to our department for hypopigmented macular lesions on chest and neck. There was a cafeau-lait spot in right loin On examination the condition was diagnosed as taenia-versicolor. Besides this, on examination small asymptomatic subcutaneous nodular lesions (size 0.5 cm. to 1,2 cm) were seen and palpated over the chest, abdomen, neck scalp and a few on the extremities. On palpation the nodules were freely mobile and firm in consistency and oval in outline.

The duration of nodules was 5 years. In the diet patients gave history of leating pork. There was history of passing whitish flat segments in stool till todate. There was no history of seizures, any unconsciousness or giddiness

On the basis of clinical examination a tentative diagnosis of cysticercosis cellulosae was entertained and patient was subjected to investigations summarised in the table

Case No. 2. B. R. a 31 year Hindu male, a resident of old Delhi attended the Skin O. P. D. with healed scrofuloderma lesions in the neck. On examination small asymptomatic subcutaneous nodular lesions (Size 1 cm. to 1 5 cms.) of 10 years standing, wich were few in the beginning and later became more numerous, were seen and palpated in the neck, chest, abdomen, back and a few on the extremities. On palpation the nodules, as in the previous case, were found to be freely mobile and firm in consistency and oval in outline.

This patient, who was a non-vegetarian, gave histery of passing segments in stool about 10 years back, but at present was not passing any flat segments.

On basis of clinical examination a diagnosis of cysticcrcosis was suspected and confirmed by investigations summarised in the table.

Investigationes

Investigations	Case No. 1	Case No. 2
1. Repeated stool examination	i) Ova of tapeworm seen	i) Negative for ova of tapeworm
	ii) Patient given single dose treatment of mepacrine, followed by passage of adult worm of approx. 2.5 meters length with scolex.	ii) do
	iii) Repeat stool examination after deworming, negative for ova of tapeworm.	iii) do
2. Blood examination	Hb. 13.5 gm% T. L. C. 14400/ cumm D. L. C. P30% L30% E 40% Absolute eooinpeill Count 5700 E. S. R. 44 mm 1st hour	Hb. 12 gm% T. L. C. 8250/cumm D. L. C. P 65% L 32% M 1% E 2% E.S.R. 16 mm 1st hour
3. Radiological examination		
(a) Chest P. A. view	Radiopaque calcified nodular shadows on right lower lungfield and in soft tissue.	Nodular shadows in neck, right field and scapular region.
(b) X-ray thighs, (Right & Left) A. P. & Lateral	Showed multiple radiopaque denstities of cysiicereci	Few radiopaque cysticerci seen.
(c) X-Ray skull A.P. and Lateral	N. A. D.	N. A. D.
4. Histopathology of subcutaneous nodule.	Cysticercosis Cellulosae	Cysticercosis Cellulosae
5. C. S. F. examination		Not done
(a) Biochemistry	Protein 30 mgm% Chlorides 640 mgm% Sugar 55 mgm% Globulins Normal	
(b) Cell-Cytology	No eosinophils	
6. E. C. G	N. A. D.	N. A. D.

DISCUSSION

The cases of cysticercosis in two non-vegetarian young adult males are reported, who had attended the Skin O. P. D., Safdarjang Hospital for some other skin ailments and cysticercosis was discovered as a chancefinding. Like 6.6% cases of Dixon & Hargaves series these nodules had not given any subjective symptoms to the patients inspite of their presence for long periods of 5–10 years. In both the cases the diagnosis of cystioereosis was confirmed by histopathological examination of subcutaenous nodule which provides indisputable evidence. The eosinophilia was a marked feature in the presence of an adult tapeworm in the gut in case No. 1, while in case No. 2 it was conspicuously absent probably due to absence of taeniasis. The investigations were carried out in all other perimeters to find out other organ involvements but did not subscribe to any one of them. In case No. 1, due to presence of cafeau-lait spot, it was easy to be carried away by the diagnosis of neurofibromatosis, but the clinical experience of the authors helped to diagnose it as cysticercosis clinically. Both the cases are under follow up study for production of any complications in future.

SUMMARY

Two rare cases of cysticercosis cellulosae are reported. Relevant literature on the subject has been reviewed and discussed.

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