Spontaneous extrusion of subconjunctival *Cysticercous* cyst: a case report

JB Shrestha, P Paudel and PC Karmacharya

B.P. Koirala Lions Centre for Ophthalmic Studies, Institute of Medicine, Tribhuvan University, Kathmandu

Corresponding author: Dr. Jyoti Baba Shrestha, MD, B.P. Koirala Lions Centre for Ophthalmic Studies, Institute of Medicine, Tribhuvan University, Kathmandu, Nepal, e-mail: jyoti_baba@hotmail.com

ABSTRACT

Ocular cystericosis is the common occurrence among the people of lower socioeconomic status and poor personal hygiene in developing countries. However, spontaneous extrusion of subconjuctival cysticercous cyst is a rare incidence. The present case report describes a spontaneous extrusion of subconjunctival cyst in a 12 year old boy in our clinical set-up. The histopathological examination revealed subconjunctival cysticercous cyst. The extrusion was associated with improvement in clinical sign and symptoms. Cysticercosis should be considered in any case of inflammatory swelling of subconjunctival space especially in people of lower socioeconomic status and poor personal hygiene.

Keywords: cysticercous cyst; conjunctival swelling; spontaneous extrusion; histopathological examination.

INTRODUCTION

Cysticercosis is caused by infestation with cysticercous cellulosae, the larval stage of Taenia solium, which normally develops and passes its lifecycle in the muscles of pig. Human cysticercosis is an accidental event, which results from either ingestion of cysticercous larvae in raw or inadequately cooked pork or ingestion of *T. solium* in contaminated water, food, and vegetables or autoinfection due to poor hygiene.[1]

The most frequent location of involvement by the larvae is the central nervous system, followed by subcutaneous tissue, skeletal muscles, the heart muscle and eye.[2] Intraocular involvements vary widely. The great majority of cysts are subretinal or in the vitreous humour but they could occur at any site as palpebral, subconjunctival, sub tenons, recti muscles, orbital, in the anterior chamber, in the iris and in the choroids.[3]

We report a case of subconjunctival cysticercosis in a child, which extruded out spontaneously.

CASE REPORT

A 12-year-old schoolboy of average built was seen in pediatric ophthalmology clinic of B.P Koirala Lions Center for Ophthalmic Studies, Tribhuvan University Teaching Hospital. He noticed redness and a gradually progressive swelling associated with watering and discomfort in the right eye since two months. On the way to hospital, he noticed something protruding out from the swelling.

The child belongs to a family with poor socioeconomic status. He walks barefoot and has been defecating in the open field. He is a non-vegetarian. However, he didn't give history of playing with pets and had never consumed pork. There is no history of headache, seizures, muscle

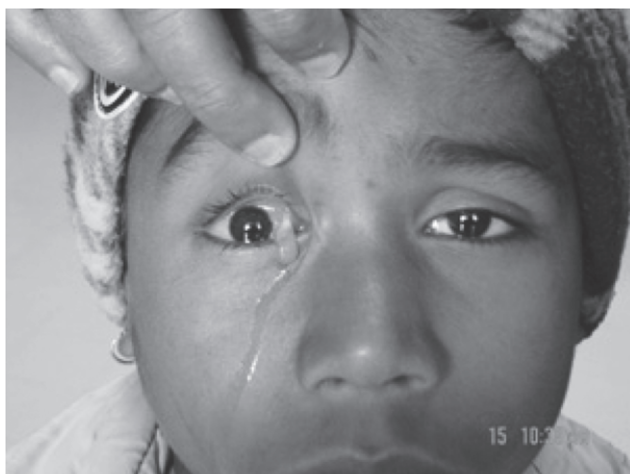

Fig. 1. Cyst protruding from conjunctiva

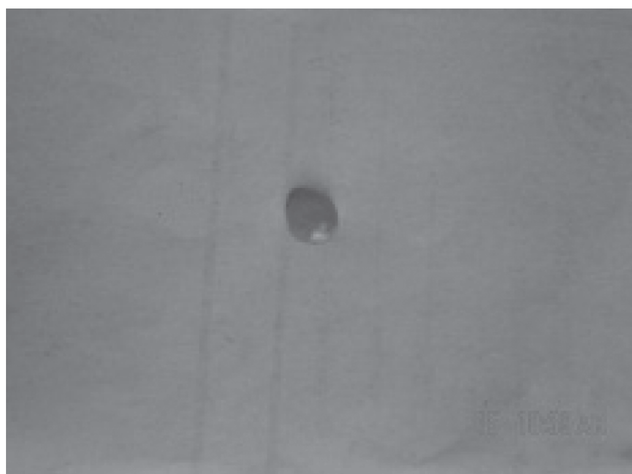

Fig. 2. Cyst after extrusion

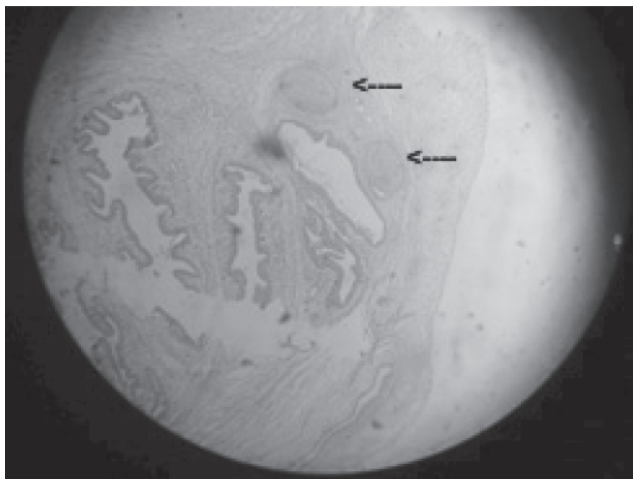

Fig. 3. Histopathology of cyst showing suckers with arrows

Fig. 4. Prominent Improvement in signs after extrusion

ache or subcutaneous nodules.

On examination, the patient's visual acuity was 6/6 in both eyes. Extra ocular motility was full in all cardinal positions of gaze. The right eye showed a smooth, yellowish, ovally elongated cystic swelling of approximately 1X0.5 cm size hanging down from near the medial canthal region (Fig.1). It was so loosely adherent that it just extruded from the eyeball without manipulation right in front of us. The conjunctiva was congested and the pus was seen draining out of the rent in the conjunctiva. The pus was sent for culture sensitivity test. The left eye was absolutely normal.

General physical and systemic examination revealed no abnormalities. Complete blood count and ESR were found to be normal. B-scan of the orbit was normal. Radiograph of the skull was normal. Pus culture was sterile. Stool examination didn't show eggs of *T. solium.*

The extruded cyst was examined and identified in the pathology department of Tribhuvan University Teaching Hospital. It was white, globular that measured 1X 0.8cm (Fig.2). The cavity contained colorless fluid with chalky white spot at one position suggesting scolex.

Histopathological examination revealed larval form of *T. solium* with prominent cuticle, aggregated subcuticular cells, and smooth muscle fibres. Two suckers are also seen (Fig.3).

There was an improvement in symptoms and signs after the extrusion (Fig.4).

DISCUSSION

Soemmerring was the first to report a case of ocular cysticercosis in the year 1830.[4] Ocular involvement occurs in 13-46% of patients with cysticercosis.[5] Bansal et al, have reported 3 cases of spontaneous expulsion or partial prolapse of cysticercosis. In one case it got extruded from subconjunctival space and in two cases, from the orbit.[6] The eye frequently involved is reported to be the left.[5] But our patient had involvement of the right eye. The area of frequent ocular involvement is reported to be the medial aspect[7] as seen in our patient. Cysticercosis has a global distribution. It is frequently reported from poor countries where people have poor personal hygiene and the pigs are fed human feces. Such a situation prevails in Nepal. The chances of ingesting cysticercous larvae by eating poorly cooked pork are high in Nepal. Similarly sanitation, personal hygiene and health education is a serious problem in this country. Ingestion of ova of *T. solium* leads to release of cycticercous cellulosae in the intestine and their subsequent migration to various parts of the body including the eyes. This kind of case is not yet reported in Nepal. Thus, it is very important to consider cysticercous cyst in the differential diagnosis of any inflammatory swelling of subconjunctival space.

REFERENCES

1. Duke- Elder S, editor. Cysticercosis. In System of Ophthalmology. Henry Kimpton. London: 1965; VIII: 423-5.
2. Ryan SJ. Ocular cysticercosis. Retina (2nd ed) CV Mosby St Louis 1994; 2: 1553-7.
3. Baily GG. Cysticercosis. In Cook GC, editor. Manson's tropical diseases (20th ed) London: WB Saunders 1996; 1509-16.
4. Duke- Elder S editor. Cysticercosis. In System of Ophthalmology. Henry Kimpton. London.1978; XV: 40.
5. Malik SRK, Gupta AK, Chaudhary S. Ocular cysticercosis. *Amer J Ophthalmol* 1968; 66: 1168-71.
6. Bansal RK, Gupta A, Grewal SP, Mohan K. Spontaneous extrusion of cysticercous cysts - Report of 3 cases - *Indian J Ophthalmol* 1992; 40: 59-60.
7. Sen DK, Mathur RN, Thomas A. Ocular cysticercosis in India. *Brit J Ophthalmol* 1967; 51: 630-2.