

## ORAL CYSTICERCOSIS

KANUPRIYA GUPTA<sup>1</sup>

MDS, Oral And Maxillofacial Pathology, Senior Research Fellow, Faculty of Dental Sciences, IMS, BHU, Varanasi, Uttar Pradesh, India

### ABSTRACT

**Cysticercosis rarely involves the oral region in humans, although is a common disease in developing countries. It is important to consider the diagnosis of cysticercosis in oral solitary nodular lesions presenting in patients living in an endemic area. This review emphasizes the role of a dental surgeon in the detection of a disease that can have more serious involvement, as well as the importance of routine histological examination.**

**KEYWORDS:** Taenia solium, oral cysticercosis

Cysticercosis is a condition in which a human acts as the intermediate host of *Taenia solium*, a pork tapeworm. The larvae infestation sites frequently include cerebral tissue, ocular organs, and muscles (Pinswasdi and Charoensiri, 1997). The life cycle of *Taenia solium* is characterized by different stages of development, requiring various kinds of hosts that can appropriately harbour the eggs (proglottids), the oncospheres, the larvae, and the adults (Pinswasdi and Charoensiri, 1997 & Romero and Aguirre, 1995). The term taeniasis is used when these larvae complete their life cycle developing into adult worms in the definitive host (De Souza et.al, 2000). In the endemic areas which are Mexico, South America, Eastern Europe, India, and the northern part of Asia, cysticercosis in pigs is caused by contamination of swine food by human faeces (Pinswasdi and Charoensiri, 1997). Cysticercosis in human is common in cerebral tissue, subcutaneous tissue, muscle, and the eye. The pathological conditions manifested are usually the functional disturbance of the infected tissue such as seizure and visual impairment (Tandon, 1983). Cysticercosis in the oral tissue such as the tongue, labial mucosa, buccal mucosa, and floor of the mouth have also been reported (Rao et.al., 1990 & Fazakerley and Woolgar, 1991). However, the incidence is very rare and a correct and precise clinical diagnosis is infrequently established. Usually the disease is confused with other benign swellings (Romero and Aguirre, 1995).

### DISCUSSION

Cysticercosis, a helminthic disease commonly seen India, Latin America, Eastern Europe and Southern Africa, results from extra intestinal encystations of the larval form of *Taenia solium*. Cysticercosis presents with multiorgan infestations, giving rise to varied symptoms (Sharma et.al., 1986). Oral cysticercosis is a rare event that, when encountered, usually elicits a clinical diagnosis of mucocele. The most common locations for oral cysticercosis are the lips, buccal

mucosa, and tongue (Romero and Aguirre, 1995). In a large series of 450 cases, Dixon and Lipscomb<sup>8</sup> detected oral involvement in only 8 cases (1.8%). Some of these 8 cases showed subcuticular nodules. Similar findings of multiple foci have been mentioned by other authors (Timosca and Gavrilita, 1974 & Bedi, 1978). Association of oral cysticercosis and post kala azar dermal leishmaniasis have been reported (Indira et.al., 1990).

The male-to-female ratio also indicates that there is no gender preference for oral cysticercosis. The differential diagnosis of oral cysticercosis depends on the location of the lesion. Nodules on the lips and cheeks may be considered as fibroma, lipoma, mucocele, pyogenic granuloma or pleomorphic adenoma. Nodules on the tongue may be considered as fibroma, pyogenic granuloma, granular cell myoblastoma or rhabdomyoma (Lustmann and Copelyn, 1981).

Laboratory tests and radiologic imaging can be used to confirm cysticercosis, but the definitive diagnosis can only be confirmed by the histological examination<sup>12</sup>. Risk factors for human cysticercosis include frequent consumption of pork, poor personal and household hygiene, as well as a history of passing tapeworm proglottids in feces. Once a person becomes the intermediate host, cysticercosis can develop in various organs and tissues. In order of frequency, the tissue affected by cysticercosis are subcutaneous layers, brain, muscles, heart, liver, lungs, and peritoneum. The intensity of the signs and symptoms produced by cerebral cysticerci (headaches, acute obstructive hydrocephalus, and epileptic seizures) depend on the number of invasive oncospheres present and their anatomic location. In some occasions, the symptoms may even suggest the presence of a cerebral neoplasm. Iridocyclitis, secondary glaucoma, and cardiac arrhythmias may also occur (Romero and Aguirre, 1995).

<sup>1</sup>Corresponding author

The treatment of oral cysticercus is surgical excision and the biopsy specimen will allow confirmation of the tentative diagnosis (Lustmann and Copelyn, 1981). The treatment in other locations is dependent on the symptomatology and the accessibility of the lesion to surgical intervention (Lustmann and Copelyn, 1981). In summary, we showed the clinical and histopathological findings in oral cysticercosis, emphasizes the need to consider cysticercosis along with other causes of cystic lesions, particularly in areas with a high incidence of this condition.

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