

Received : October, 2011; Accepted : November, 2011

Raw meat consumption and incidence of bovine cysticercosis in Ethiopia: A brief overview

YOSEF DENEKE, ABAY BESHAH, D. RAMESH, RAJIB DEB AND BLESSA SAILO

Deneke, Yosef, Beshah, Abay, Ramesh, D., Deb, Rajib and Sailo, Blessa (2011). Raw meat consumption and incidence of bovine cysticercosis in Ethiopia: A brief overview, *Food Sci. Res. J.*, 2 (1) : 83-91.

Key words : Bovine cysticercosis, Raw meat

Ethiopia has large number of livestock. However, its productivity remains marginal due to prevalent disease, malnutrition and management constraints. Parasitism represents a major set back to the development of the sub-sector. However, data on epidemiology, economic loss and relative hierarchy of individual parasitic infections are hardly available. For understanding these contexts, yield paramount importance to determine the type and scope of control intervention is to be envisaged (Jobire *et al.*, 1996).

Among the parasites of livestock, *Bovine cysticercosis* affects the muscle of cattle. Its life cycle is entirely dependent on the link between man and cattle. Thus, any break in this links can result in the total elimination of the parasite (Urquhart *et al.*, 1996). *Bovine cysticercosis* is also known as beef measles. It is prevalent in most countries of the world (Frolova, 1982; Smyth; 1994, Urquhart *et al.*, 1996). Financial losses can be considerable when large numbers of animals are affected, such as in feedlot. Most incidents arise as a result of direct exposure to proglottids shed from farm workers. There are also some reports of large scale outbreaks resulting from sewage contaminated feed or forage (Wayne, 2002). Hence, cysticercosis is an important public health and economic problem because of its consequences on human nutrition and economy of some countries (Wanzala *et al.*, 2003).

Globally, carriers of bovine *taeniosis* are 77 million and about 40% of them live in Africa. In relation to developed countries even if the disease has a very low prevalence, the problem with removal and treatment facilities in their sewage system plays a role in the

distribution of eggs (Lightowlers, 2003), since it is shown that the eggs can survive in sewage (Arundel and Adolph, 1980). The larvae of *T. saginata* still cause significant problems in many parts of the world.

In Ethiopia, the adult parasite in human and the cyst in cattle population is widespread nationwide but differ from region to region. The prevalence of *T. saginata* in human population indicated 64.2% in Hawassa (Fufa, 2006), 75.9% in East Showa (Hailu, 2005) and 89.11% in Addis Ababa (Tembo, 2001). *Bovine cysticercosis* prevalence in abattoir survey varied from region to region in cattle population. In Gonder the range was from 4.9% (Dawit, 2004) to 9.7% (Amsalu, 1989), 19.5% in Bahir Dar (Mulugeta, 1997), 21% in Nekemte (Ahmed, 1990), 17.5 % in East Shewa (Hailu, 2005) and 24.8% in local and 52.38% in cross-breed cattle in Hawassa (Fufa, 2006).

Morphology:

Adult worm:

T. saginata is ribbon- shaped flattened, multi-segmented and hermaphrodite. The body is divided into three distinct parts of scolex (head), neck and strobila. *T. saginata* measures 4 -8 meters in length and rarely measured up to 15m (Urquhart *et al.*, 1996).

The gravid segments are 10-20 mm long and are usually shaded singly and leave the host spontaneously or crawling about the body, clothes and beds of human beings self and cross- fertilization between proglottids is possible. The gravid proglottids are 15 to 35mm long and 5 to 7mm wide filled with eggs, which detach from the strobila singly and leave the host via anus. This implies that coprological examination has a limited value in the diagnosis of *T.*