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**Ultrastructural changes in hydatid cyst walls obtained from human cases ,  
exposed to different therapeutic approaches.**

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**ABSTRACT:**

Recurrence of cystic echinococcosis as a result of treatment failure is frequently reported to cause a major problem in management of such serious parasitic infection. The deeply seated innermost germinal layer of hydatid cysts is a relatively delicate layer, yet responsible for viability maintenance of this parasitic stage. In this study, a trial was done to explore the ultrastructural changes in germinal and laminated layer of the hydatid cyst for the first time in human cases exposed to different therapeutic approaches which were done earlier to the final open surgical intervention. Four groups were included: group 1 did not receive any earlier form of treatment; group 2 was previously treated with only medical therapy; group 3 was treated with a single course of medical treatment, plus a single PAIR technique; group 4 was treated with multiple courses of medical treatment plus multiple PAIR techniques. Complete alteration of ultrastructural features of germinal and laminated layers were observed only with samples from group 4, indicating a kind of failure of the therapeutic approaches used in group, 1, 2, and 3, unless repeated in group 4 to achieve a real change regarding the fitness of the parasitic cystic lesions. Searching for more effective, safe, therapeutic method is highly recommended which may end the suffering of the affected patients.

**Keywords:** Hydatid cysts . Germinal layer . Laminated layer . PAIR technique .  
Albendazole . Transmission electronmicroscopy