surgical aspects of hydatid disease of the liver

tarek k. el din el emam

Hepatic echinococcosis is a parasitic disease, endemicin many countries in the world as Middle East, New Zealand,Australia and North America, where close association betweenman and sheep which are the intermediate hosts and dogswhich are the definitive hosts exist.The causative parasite is a small tapeworm calledechinococcus granulosus, measures 3-6 mm in length and isformed of head, neck and 3 proglottides,the last of which isgravid and contains 400 - 800 eggs, containing hexacanthembryo,which are remarkably resistant to extremetemperature, common intestinal antiseptics and some commonlyused disinfectants.The adult worm is anchored by means of hookletsbetween the villi of terminal jejunum, the gravid segmentseparates or ruptures in the intestine and the ova becomeliberated, travel through the gastrointestinal tract oftheir definitive hosts to pass out with stool and pollutesoil and grass. Cattle and sheep grazing on polluted grassswallow the ova which hatch on reaching the duodenumliberating the embryos. The latter pierce the intestinalmucosa gaining access to mesenteric circulation and finallyto the liver via the portal vein where about .60% of theembryos are retained and develop into hydatid cysts. Theremainder pass through the liver to reach the lungs and whatcan pass through the lung will reach the systemic arterialcirculation and reach other organs where they also developinto hydatid cysts and so multiplicity of the disease shouldbe considered and put in mined.Dogs eating offal from infested sheep swallow thescolices which settled in the jejunum and mature into adultworm. Man is infested through association with affecteddogs or eating polluted vegetables, so, man is considered asan accidental intermediate host who plays no.role in thecompletion of the life cycle of the parasite. Childrenusually play with dogs and so they are more prone to beinfested than adults.The disease may remain clinically silent for a longperiod, until the cyst grows to a size sufficient to causesymptoms and so although infestations are more common inchildren the disease usually presents clinically in adultseither as mere hepatomegaly or abdominal mass or presentsby its complications as obstructive jaundice, acute abdomendue to intraperitoneal rupture, chest symptoms due to intrathoracicrupture or by allergic manifestations ranging fromurticaria up to fatal anaphylactic shock due to theantigenic nature of the cyst fluid.There is no diagnostic signs for the disease, so itis mandatory to perform a select number of investigations,serological tests are helpfUl, however it should be clearthat at least two different tests should be performed for•-101-diagnosis of the disease and even when this is done, somefalse positive and some false negative results will occurand so surgical decision should not be based upon theresults of serological tests

alone.Ultrasonography and computed tomography are the bestdiagnostic tools, other imaging techniques including plainfilms, contrast studies and radio-iotopic scanning may behelpful but they are not so accurate as ultrasonography andcomputed tomography.Medical treatment in not curative at present.Mebendazole, Albendazole and other drugs have been usedwith some success. Surgery remains the only effective andcurative treatment. Evacuation of the cyst, removal of theparasite and management of the residual cavity is thesimplest and safest method provided that contamination ofthe operative field can be prevented.In cases complicated by jaundice due to intrabiliaryrupture of the cyst, which is the commonest complication,the common bile duct should be explored and drained byT-tube or choledochoduodenostomy which is considered themost effective and uncomplicated way to drain the commonbile duct following intrabiliary rupture of hydatid cyst.Postoperative recurrence varies according to the agegroup (being commoner in children than in adult), theorgan involved and the surgeon’s skill or experience.