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SCHISTOSOMIASIS OF THE SCROTUM

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SUMMARY

A case of schistosomiasis of the scrotum occurring in a 17 year-old boy is presented and the histopathologic findings described.

The Authors discuss the pathogenesis of the ectopic localization of schistosomiasis.

INTRODUCTION

The ova of *S. mansoni* incites chronic granulomatous reactions of the surrounding tissue mainly in organs directly subjected to portal venous circulation as the liver [2, 10], intestines [5], gall bladder [4], leading in the severe cases to the establishment of the characteristic hepatic fibrosis of Symmers, associated with portal hypertension, esophageal varices, collateral circulation [13].

Schistosomotic lesions have been found outside the portal territory constituting the so-called ectopic lesions [9]. Genital lesions are common complications of longstanding or heavy infections [6, 12] and extra-genital cutaneous schistosomiasis have been recorded previously in cases of *S. haematobium* [1, 3, 11] and *S. japonicum* infection [8].

The following report deals with a rare ectopic localization of Manson's schistosomiasis in the scrotum which has been successfully treated by antimonytherapy.

CASE REPORT

J.J., a 17 year-old boy, was admitted to the hospital complaining of pruritic eruptions of the scrotum, accompanied by marked edema of the region of 6 months-duration. On examination there was an ulcerate plaque of 4 cm in diameter in the scrotum, surrounded by edema, which increased especially after rubbing or scratching. There were whitish nodules as well as painless papules round in shape and ranged from 2 to 4 mm, widespread throughout the scrotum. The remainder of physical examination did not disclose any alteration. The liver and spleen were within normal limits. A X-rays of the thorax did not reveal any evidence of pulmonary hypertension. The white blood cell count was 8,000 per cm with a 11 per cent eosinophilia. Stool examination disclosed eggs of *S. mansoni, Tricocephalus trichiurus, Ascaris lumbricoides.* Biopsies of several regions showed great number of *S. mansoni* eggs. The patient was maintened with 10 intramuscular injection of fuadina (neoantimosan, Rhodia). Thirty days after treatment the ulcerated lesion become healed and were partially replaced by fibrous scars. The nodules and papules disappeared as well as the edema and pruritus and were substituted by fibrous tissue.

HISTOLOGIC FINDINGS

The stratified squamous epithelium presents moderate acantosis. There is frequent microabscesses (Fig. 1A) or intra-epidermal "furrows" filled with leukocytic neutrophils and eosinophils and often containing *S. mansoni* eggs (Fig. 1B). The stratum corneum shows limited thickening and sometimes presents eggs into its layers. The underlying cutis exhibits marked edema and hyperemia and contains a scattering of polymorphonuclear leukocytes, lymphocytes and focal accumulation of eosinophils. The eggs are frequently surrounded by an exsudative

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reaction (Fig. 1C) formed by neutrophilic and eosinophilic leukocytes and are seen spreading throughout the dermis (Fig. 1D).

The papillae and upper dermis is edematous and congested. A compact mass of plasmacells, lymphocytes with an admixture of fibroblastic proliferation are seen in the deep dermis. Many vessels are dilated and exhibit edema beneath the swolling endothelium. In the corium many *S. mansoni*

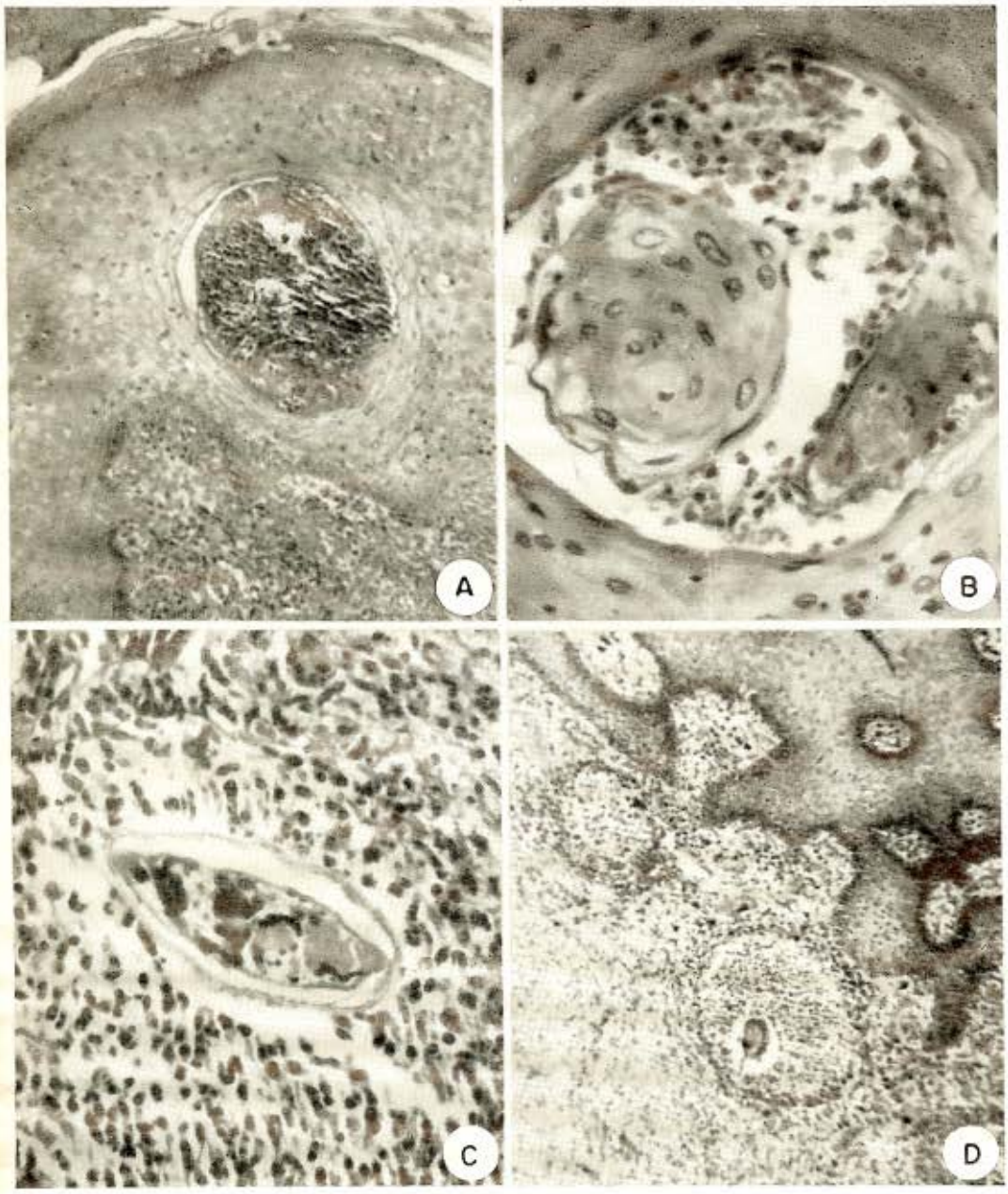

Fig. 1 — A) Intra-epidermal microabscess filled with polymorphonuclear and eosinophilic leukocytes (H.E., 100×). B) Intra-epidermal cyst. Note exfoliated epithelial cells, leukocytes and *S. mansoni* egg (H.E., 400×). C) *S. mansoni* egg surrounded by an exsudative reaction (H.E., 400×). D) Dermal microabscess centered by *S. mansoni* eggs. Note compact inflammatory intersticial reaction (H.E., 100×).

eggs are present, sometimes in early period of the development and without determining any reaction around them. There is at the margin of the ulcer, moderate acantosis with extensive downgrowth of rete pegs, showing a characteristic appearance of pseudoepitheliomatous hyperplasia.

DISCUSSION

The ectopic lesions in schistosomiasis have been the subject of many reports in the literature and their importance has been emphasized mainly in endemic areas where they constitute a remarkable problem. The pathogenesis of the ectopic localization has been matter of many controversial discussion and many research is still required to clear-up this problem. Portal hypertension represents an important condition in the development of the ectopic lesions, by establishing collaterals, short-circuiting the portal-systemic circulation, facilitating the diverting of eggs, adult dead and alive worms and their products to aberrant sites. Some Authors postulate an arteriovenous fistula as a route for eggs to pass from the right to left heart circulation [3]. According to FAUST [9] the vertebral venous system seems to represent an important route which communicates with the vesical and hemorrhoidal veins making easy the spread of *S. mansoni* eggs and adult worms to ectopic sites without even involving the hepatic or pulmonary circulation. The rôle of inflammatory adhesions caused by the periovular reaction and the necrotizing changes producing regional anastomoses must be also considered [7].

RESUMO

Esquistossomose do escroto

Os Autores descrevem um caso de esquistossomose do escroto, em paciente de 17 anos, apresentando os achados histopatológicos. Analisam também, a patogênese da localização ectópica da esquistossomose mansônica.

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