

SCREENING OF POTENTIAL PRODRUGS ON CELLS DERIVED FROM DUPUYTREN'S DISEASE PATIENTS

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Dupuytren's disease is a fibroproliferative disorder, the cure for which is still limited to surgical excision of the affected fascia, often leading to high recurrence rates. Due to this fact, non-surgical treatments are being investigated, among them those targeting molecular processes of proliferation and differentiation in Dupuytren's cell cultures. Drugs with antiproliferative action may be valuable in D.D. treatment. Through characterization of changes on D.D. specific cells, we therefore, decided to test the therapeutic potential of new cytostatic drugs for D.D. treatment and/or for reduction of post-operative recurrence rates. The N-sulphonylpyrimidine derivate, amidino-substituted benzimidazol(1,2-a)quinoline, and amidino dihydrothienothienyl(2,3-c)quinolone hydrochloride, known to affect proliferation process, were tested for their antiproliferative activity on primary fibroblasts/myofibroblasts cell cultures derived from the palmar fascia of patients with D.D. Only amidino dihydrothienothienyl(2,3-c)quinolone hydrochloride acted in a highly specific manner on cells derived from diseased fascia of D.D. patients and exhibited a low cytotoxic effect. This result might be a consequence of its specific activity on cytoskeleton changes occurring in differentiating cells. A similar short term differential antiproliferative effect was observed by the N-sulphonylpyrimidine derivate that was, however, completely lost after 6- and 14-day treatments. The amidino-substituted benzimidazol(1,2-a)quinoline exerted a strong non-specific, dose related antiproliferative activity on cell types.

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