REHABILITATION IN CANCER SURVIVORS: INTERACTION BETWEEN LIFESTYLE AND PHYSICAL ACTIVITY

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Cancer survivors are exposed to greater risk than the general population for several diseases: second primary and/or recurring cancer, sarcopenic obesity, metabolic syndrome and the related cardiovascular diseases, osteoporosis, decreased fatigue endurance, accelerated functional impairment and postural dysfunction; this is due to many factors, not only chemo/radiotherapy for cancer treatment and genetic predisposition, but also inappropriate lifestyle behaviour. The main interest of research on survival should be focused on the identification of the interventions capable of preventing premature mortality and on improving the patient’s quality of life (QoL). Rehabilitating exercise and physical activity are effective tools to reach this goal, especially if combined with an appropriate lifestyle tailored to the individual needs, to provide a new comprehensive welfare model developed under the oncologist’s supervision.

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CLINICAL AND LABORATORY INVESTIGATION OF EXPERIMENTAL ACUTE PANCREATITIS IN THE CAT


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The main objective of this study is the serial evaluation of clinical and laboratory changes in cats with experimentally-induced acute pancreatitis (AP). A total of 16 clinically healthy young adult DSH cats were included in the study. Acute pancreatitis was induced in 10 (AP group) by infusing oleic acid into the pancreatic duct, while the other 6 cats served as sham-operated controls (C group). Depression or lethargy, anorexia, abdominal pain, and a palpable mass in the anterior abdomen were the main clinical findings in cats of the AP group. Laboratory data revealed non-regenerative anaemia, mild hypoalbuminaemia, transient hyperglycaemia, and hypertriglyceridaemia. Serum lipase activity, feline trypsin-like immunoreactivity (fTLI) concentration, and feline pancreatic lipase immunoreactivity (fPLI) concentration increased significantly within the first 24 hours after the infusion of oleic acid, with time-dependent positive correlation. In both group of cats urine amylase-creatinine ratio and amylase-creatinine clearance ratio were increased. In cats of the AP group, abdominal ultrasonography revealed a hypoechoic and enlarged pancreas, along with peripancreatic fluid accumulation. Peritoneal effusion was consistent with a sterile exudate, with higher lipase but lower amylase activities.
when compared to their serum counterparts in all AP group cats. The induction of AP was confirmed by pancreatic histopathology. AP is characterized by vague symptomatology. Increases in serum fTLI and fPLI concentrations occur early in cats with pancreatitis. In general the two analytes run a parallel course, but fPLI may be increased longer than fTLI. The measurement of lipase activity in the peritoneal fluid could be considered diagnostic.

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ABNORMAL PROTEINS IN PRIMARY BREAST CANCER TISSUES FROM 25 SUDANESE PATIENTS.


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This study was designed to compare antigen content of normal with cancerous breast tissues from Sudanese patients. Fifty tissue samples (normal and cancerous) from 25 Sudanese patients with primary breast cancer were analyzed for their protein content using 2D PAGE, and for protein identification using LC/MS and nr.fasta data base search. Four proteins were found in the cancerous tissues which were absent from the normal tissues of the same patients: thioredoxin mutant D60n, Chain A, X-ray crystal structure of human galectin-1, rcTPM3 and a truncated isoform-2 of beta tropomyosin spots. The thioredoxin mutant is a protein with 105 amino acids and is characterized by the fact that Asp 60 is replaced by Asn. The Chain A, X-ray crystal structure of human galectin-1 is a synthetic mutated protein with 134 amino acids, cysteine 16 is replaced by unknown amino acid (X). The rcTPM3 is a fragment of tropomyosin-3 with 247 amino acids. The truncated beta tropomyosin is isoform 2 with 257 amino acids. Primary breast cancer tissues from Sudanese patients are characterized by abnormal proteins which are undetectable in the normal tissues. These proteins can be used, as a target for drug therapy, for diagnosis and in vaccination trials.

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INTERMITTENT AND PERSISTENT ALLERGIC RHINITIS AND ASSOCIATION WITH ASTHMA IN CHILDREN

The natural history of allergic rhinitis (AR) is commonly characterized by worsening of symptom severity, frequent comorbidity with asthma, and polysensitization to aeroallergens. The polysensitization phenomenon starts in early childhood. AR classification has been recently revised, and some studies investigated the new types: intermittent (IAR) and persistent (PER) AR. However, no study has been carried out on children regarding this issue. This preliminary study was performed on a large cohort of children with allergic rhinitis to evaluate the type and severity of rhinitis and its possible association with asthma, including severity grade. One hundred and thirty-nine children (86 males, 53 females, mean age 11.8 years, range 3.5-17.7 years) with allergic rhinitis were prospectively and consecutively evaluated. Seventy-one children had rhinitis alone and 68 had rhinitis associated with asthma. Forty children had IAR, 30 of whom with moderate-severe grade. Ninety-nine children had PER, 65 of whom had moderate-severe grade. The severity of AR was not associated with asthma presence (Fisher $\chi^2 = 0.5765; \text{Prob.}=0.9018$). Regarding asthma severity, 30 children had the intermittent form, whereas 38 had the persistent form: 15 mild, 22 moderate, and 1 severe. This study provides the first evidence concerning the ARIA classification in children, partially confirming findings obtained in adulthood.

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were maintained unchanged with respect to those adopted by patients in the past. Among the 207 participants, the main diagnosis was irritant contact dermatitis, followed by allergic contact dermatitis and atopic dermatitis. Nearly half of the patients (49%) applied the barrier cream once or twice a day, while the remaining patients used it three or more times per day. Regardless of rescue therapy with TCs, regular use of the barrier cream caused a progressive significant improvement of eczema severity, as indicated by dermatologists’ and patients’ assessments. A significant reduction in the amount of the TC applied in the last 3 months and in the number of TC treatment days during the previous 4 weeks was found at the end of 12-week treatment with the barrier cream as compared with baseline. The product was also well-tolerated and accepted by the majority of patients. The results of this study suggest that a barrier cream containing polyvinylpyrrolidone can represent a useful tool in the management of chronic hand eczema and may show steroid-sparing effects.

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IN VITRO SKIN PERMEABILITY OF DIFFERENT TERBINAFINE HYDROCHLORIDE FORMULATIONS

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The objectives of the study are to determine the \textit{in vitro} permeability of different terbinafine hydrochloride formulations through human skin and to measure the respective concentrations of each formulation within the exposed skin tissue. The permeation of three commercially available 1\% terbinafine hydrochloride formulations and two terbinafine hydrochloride solutions of 10 and 20 mg/ml through human skin was investigated using an \textit{in vitro} continuous flow-through perfusion system. The terbinafine hydrochloride retained in the skin was extracted and analysed. The terbinafine hydrochloride from the different formulations readily diffused into the skin tissue. However, no flux values for any of the terbinafine hydrochloride formulations through the skin into the receptor fluid were found. The mean terbinafine hydrochloride concentrations in the skin after 24 h exposure to the three commercial formulations were 3.589, 1.590 and 4.219 µg/ml respectively. The mean terbinafine hydrochloride concentrations in the skin after 24 h of exposure to the terbinafine hydrochloride solutions (PBS/Methanol 1:1) of 10 and 20 mg/ml were 85.280 and 154.680 µg/ml respectively. The mean terbinafine hydrochloride concentration in the skin exposed to the 10 mg/ml PBS/Methanol solution was higher than those from the three commercial formulations. Terbinafine seems to accumulate in skin/bind to the skin, rather than to diffuse through the skin into the receptor compartment. This unique pharmacokinetic property of terbinafine hydrochloride may enhance its efficacy as topical antifungal and reduce systemic side effects.

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LACK OF HCV REPLICATION DURING THE COURSE OF HCV-ASSOCIATED ARTHRITIS

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Viral replication was evaluated by PCR in the serum of 25 subjects with HCV–associated arthritis. Active replication resulted in 16 cases, only 10 of which presenting hypertransaminasemia. A significant correlation appeared between serum Rheumatoid Factor concentrations and viral replication only in 7 patients with hypertransaminasemia. These data suggest that the onset of arthritis in this infection is due to an autoimmune mechanism, not linked to the HCV replication.

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