High health-related quality of life among long-term survivors of childhood acute lymphoblastic leukemia.

https://arctichealth.org/en/permalink/ahliterature96540

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Date: Aug-2010

Language: English

Publication Type: Article

Keywords: Adolescent
          Child
          Child, Preschool
          Cohort Studies
          Cranial Irradiation
          Data Collection
          Drug Therapy
          Female
          Humans
          Infant
          Infant, Newborn
          Male
          Mental health
          Precursor Cell Lymphoblastic Leukemia-Lymphoma - psychology - therapy
          Quality of Life
          Survivors - psychology
          Young Adult
Abstract: Background: Health-related quality of life (HRQoL) was assessed in a cohort of long-term childhood acute lymphoblastic leukemia (ALL) survivors. Procedure: Rand-36-item health Survey (RAND-36) was used to assess subjective HRQoL in 74 survivors of ALL an average of 20 years after the diagnosis. Cranial irradiation had been administered to 46 of the survivors, while 28 survivors had solely been treated with chemotherapy. The control group consisted of 146 healthy young adults selected from local population registry. Survivors were examined by a physician and late effects were graded using the Common Terminology Criteria for Adverse Events (CTCAEv3).

Results: ALL survivors achieved significantly higher scores than the controls on three of the eight HRQoL subscales; role limitations due to emotional problems (P = 0.030), mental health (P = 0.030) and vitality (P = 0.004). In comparison to controls, survivors with a follow-up of more than 20 years had significantly higher scores on vitality (P = 0.006) and mental health (P = 0.011). Survivors with severe (grade 3 and 4) late effects scored significantly better than controls on vitality (P = 0.043) and mental health (P = 0.040). Patients who had been treated for an ALL relapse and had received the most intensive chemo- and radiotherapy had significantly higher scores on mental health (P = 0.004) and vitality (P = 0.004) than the controls.

Conclusions: Long-term survivors of childhood ALL reported equal or better HRQoL in RAND-36. Higher HRQoL scores were associated with more severe late effects and intensive therapy. Our findings support the idea of response bias.

PubMed ID: 20582965 View in PubMed
Motor nervous system impairment persists in long-term survivors of childhood acute lymphoblastic leukemia.

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Source: Cancer. 2002 May 1;94(9):2466-73

Date: May-1-2002

Language: English

Publication Type: Article

Keywords: Adolescent
Adult
Arm - innervation
Child
Evoked Potentials, Motor
Female
Follow-Up Studies
Humans
Leg - innervation
Leukemia, Lymphocytic, Acute - complications
Male
Motor Neuron Disease - etiology - physiopathology
Research Support, Non-U.S. Gov't
Time Factors

Abstract: BACKGROUND: The objective of the current study was to determine whether therapy for childhood acute lymphoblastic leukemia (ALL) results in long-lasting neurologic signs or electrophysiologic injuries within the motor tracts. METHODS: Twenty-seven children who were treated for ALL were studied clinically 5 years after the cessation of therapy by means of motor-evoked potentials (MEPs) elicited by magnetic stimulation transcranially and peripherally. An equal number of healthy children matched with regard to age, gender, and height served as the control group. RESULTS: The MEP latencies to the hands and legs elicited by stimulation at the cortex were prolonged significantly in the children treated for ALL compared with the control group, with the differences being 2.2 milliseconds [ms] (P

Pubmed ID: 12015772 View in PubMed

Mucosal pathology of the upper gastrointestinal tract associated with intensive chemotherapy in children: vitamin A supplements do not prevent lesions.

https://arctichealth.org/en/permalink/ahliterature10006
Abstract:
Intensive chemotherapy (ICT) for a malignant disease in children may be associated with clinically significant mucosal lesions of the upper gastrointestinal tract. This prospective and randomized study was conducted to evaluate more thoroughly the mucosal damage and to find out whether vitamin A therapy might prevent the development of these lesions. Gastroduodenoscopy and non-invasive methods were used to examine a consecutive series of 20 patients (10 females, 10 males, aged 1-15 years) 4 weeks after initiating the therapy regimen. Half of the patients were randomized to take vitamin A supplements for 6 weeks. During a follow-up of 6 weeks, 13 (65%) reported some symptoms of the gastrointestinal (GI) tract, diarrhea and mouth pain being most prominent. Endoscopic abnormalities were found in 13 (65%) subjects: esophagitis in 10, erosive duodenitis in 8, and gastritis in 7. Histologically, 11 subjects had duodenitis, 5 had gastritis, 3 had eosinophilic esophagitis, and 2 had lymphocytic esophagitis. Both endoscopic and histological abnormalities of the duodenum showed a close relationship with long-term (more than 2 weeks) granulocytopenia. The 4 patients with the most extensive endoscopic abnormalities were treated with HCl inhibitors, and re-endoscopy performed 4-8 weeks later showed complete recovery. The sugar permeability values, measured as the lactulose/mannitol ratio were comparable to the values obtained in the controls, and lactose intolerance was found in only 3 (20%) of the 15 children able to perform the breath test. Both the incidence of the reported GI symptoms and the endoscopically or histologically observed GI lesions were similar in the subjects randomized to take vitamin A supplements as in the controls. In this study, two-thirds of children with ICT showed erosive mucosal lesions of the upper gastrointestinal tract, and vitamin A therapy failed to prevent them. Endoscopic examination is recommended if a patient has severe symptoms indicative of mucosal pathology.
Perfusion MRI and SPECT of brain after treatment for childhood acute lymphoblastic leukemia.

https://arctichealth.org/en/permalink/ahliterature18753

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Date: Feb-2003

Language: English

Publication Type: Article

Keywords: Adolescent
Adult
Brain - blood supply
Cerebrovascular Circulation
Cerebrovascular Disorders - chemically induced - diagnosis - physiopathology
Child
Child, Preschool
Comparative Study
Cytarabine - adverse effects - therapeutic use
Female
Humans
Iatrogenic Disease
Leukemia, Lymphocytic, Acute - drug therapy
Magnetic Resonance Imaging
Male
Methotrexate - adverse effects - therapeutic use
Technetium Tc 99m Exametazime - diagnostic use
Tomography, Emission-Computed, Single-Photon
Vincristine - adverse effects - therapeutic use
BACKGROUND: Treatment of childhood leukemia may cause perfusion defects in the brain observed by SPECT. Perfusion MRI is a novel method to study brain perfusion which has not been used previously in this setting. This study was performed to compare SPECT with perfusion MRI in patients with acute lymphoblastic leukemia (ALL) after treatment. PROCEDURE: Nineteen children or young adults underwent perfusion MRI at the cessation of treatment (n = 9) or 4-8 years after the treatment (n = 10). Seventeen of them also underwent SPECT at the time of MRI (within 0-3 days, n = 14) or a couple of months later (1.5-6 months, n = 3). SPECT images and relative cerebral blood volume (CBV) and cerebral blood flow (CBF) maps from perfusion MRI were analyzed visually. Relative CBV ratios of gray matter to white matter and thalamus to white matter were also calculated from the perfusion MRI. RESULTS: Perfusion MRI did not show any focal perfusion defects, while small defects were observed by SPECT in five of 17 children (29%) in the basal, frontal or temporal areas on the left. No significant differences were observed by perfusion MRI in the relative CBV ratios in the different treatment groups. Time since treatment, age at diagnosis, brain irradiation, or findings in conventional MRI or SPECT did not have any effect on the relative perfusion values either. CONCLUSIONS: SPECT may show small perfusion defects after treatment for childhood leukemia which are not visible by perfusion MRI. The clinical significance or prognosis of these defects is not known.

PubMed ID: 12461791 View in PubMed