

Pengaruh pemberian vitamin E terhadap kadar oksidan pada leukemia limfoblastik akut fase induksi = Effects of vitamin E on oxidant level during induction phase chemotherapy of acute lymphoblastic leukemia / Dewi Anggraeni

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Abstrak

ABSTRAK

Latar belakang: Penderita leukemia limfoblastik akut (LLA) akan mengalami perubahan status oksidan dan antioksidan sejak awal diagnosis dan selama kemoterapi. Vitamin E merupakan antikarsinogenik kuat dan berperan besar mencegah kerusakan oksidatif pada struktur sel dan jaringan lewat reaksi pemecahan radikal bebas.

Tujuan: Mengetahui pengaruh vitamin E terhadap kadar oksidan, kadar enzim transaminase, dan insiden demam neutropenia pada LLA saat awal dan selesai kemoterapi fase induksi.

Metode: Uji klinis acak tersamar ganda yang membandingkan kelompok vitamin E dengan kelompok plasebo pada penderita LLA saat awal dan selesai kemoterapi fase induksi pada bulan Juni-November 2019 di poliklinik Hematologi Onkologi Departemen Ilmu Kesehatan Anak FKUI RSCM Kiara.

Hasil: Terdapat peningkatan kadar median MDA saat awal fase induksi dan terjadi penurunan MDA secara bermakna saat selesai fase induksi pada kelompok plasebo. Terdapat peningkatan median enzim transaminase (AST dan ALT) saat awal fase induksi dan terjadi penurunan delta median AST secara bermakna saat selesai fase induksi pada kelompok plasebo. Insiden demam neutropenia (episode) ditemukan hampir sama pada kelompok vitamin E dan kelompok plasebo.

Simpulan: Vitamin E tidak terbukti secara bermakna memperbaiki kadar MDA, enzim transaminase, dan insiden demam neutropenia pada penderita LLA fase induksi.

ABSTRACT

Background: Children undergoing treatment for acute lymphoblastic leukemia receive multiagent chemotherapy are associated with free radical production may affect the antioxidant status at diagnosis and during treatment. Vitamin E as an anticarcinogenenic agent play important role to prevent oxidative damage in cell by quenching free radicals.

Aim: To identify effects of vitamin E in oxidant level, serum levels of liver enzymes, and incidence of febrile neutropenia before and after induction phase chemotherapy of ALL.

Methods: A randomized double-blind controlled trial of vitamin E compared with placebo in ALL during induction phase chemotherapy between June-November 2019 at Hematology Oncology clinic, Department of Child Health, Faculty of Medicine, Cipto Mangunkusumo Hospital, Kiara.

Results: The median of MDA level was increase at early induction phase and significantly decrease after induction phase in placebo group. The median of serum levels of liver enzymes (AST and ALT) were increase at early induction phase and the delta median of AST level was significantly decrease after induction phase in placebo group. Incidence of febrile neutropenia (episode) was not much different in vitamin E and placebo group.

Conclusions: Vitamin E not significantly can improve MDA level, serum levels of liver enzymes, and incidence of febrile neutropenia in induction phase of ALL.