
Effect of iron-deficiency anemia and magnesium deficiency of the development of recurrent acute otitis media in children

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The aim of our work is to investigate the relationship between iron-deficiency anemia and or magnesium deficiency in the development of recurrent acute otitis media in children, and subsequently evaluate the effect of restoring normal hemoglobin or magnesium levels by external supplementation on the frequency of such infection in children. So 30 patients were selected with the following inclusion criteria:

- Age ranging from 2 to 12 years.
- Recurrent episodes of acute otitis media more than 3 episodes within 6 months.

And Exclusion criteria:

- Adenoid diagnosed by x rays soft tissue film on nasopharynx, lateral view.
- Eustachian tube dysfunction diagnosed by tympanometry.
- Cleft palate.
- Immunocompromised patients (diabetic, chemo and radiotherapy, renal and hepatic failure).
- Underweight for corresponding age.
- Severe anemia, $Hb\% \leq 4$ gm/dl.
- Persisting otitis media with effusion with no symptoms and sign of acute inflammation.

Exclusion of the other causes of hypochromic microcytic anemia: Summary 86 i.e Beta. Thalassemia, anemia of chronic disease & chronic bleeding.

Patients were divided into three groups A, B, and C according to the presence or absence of iron deficiency anemia and/or magnesium deficiency. Then treatment of these different groups by specific treatment. The result showed that there is a significant relationship between low HB levels (below 9.5g/dl) and frequency of acute otitis media in six months and no significant relationship between magnesium levels and frequency of acute otitis media in six months. Therefore, we recommend that, hemoglobin level should be evaluated in every child with recurrent episodes of acute otitis media. And confirm that treatment of iron-deficiency anemia by iron supplementation is an important factor to avoid recurrent acute otitis media in children.