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Can mothers with wilson's disease give her breast milk to their infant?



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Abstract

Background : Wilson's disease is a genetic disorder characterized by accumulation of copper in various tissues. In order to remove copper accumulated in the body, the patients are treated with administration of trientine, penicillamine or zinc. These treatments should be continued throughout their life. Recently, breastfeeding is recommended for babies in the world. When female patients with Wilson's disease have a baby, they want to breastfeed their infants even while continuing their treatment for Wilson's disease. However, no studies have been carried out on the safety of the breast milk feeding of the mother who is under treatment for Wilson's disease. This study deals with the safety of the breast milk feeding of mothers under treatment of Wilson's disease. **Materials and Methods :** Breast milks were obtained from 4, 4 and 2 patients with Wilson's disease who were under treatment with trientine, penicillamine and zinc, respectively. As control breast milk, Colostrums, transitional and mature milks were obtained from 16, 6 and 11 healthy mothers, respectively. The copper and zinc concentrations in the breast milk were analyzed by an atomic absorption spectrometry. At the same time, the distribution profiles of copper in the breast milk were also analyzed by HPLC-ICP-MS. Copper level bound with trientine or penicillamine in the patients was also analyzed by HPLC-ICP-MS. **Results and Discussion :** The copper and zinc concentrations were almost normal in the breast milk from mothers with Wilson's disease treated with the medicines described above. A slightly higher concentration of zinc and copper was detected in a few breast milks from the patients, but these levels were within those of infant formula. In HPLC-ICP-MS analysis of the breast milk from these mothers, the highest peak was detected in lactoalbumin-bound copper. No peak of trientine and penicillamine was detected in the milk. **Conclusions :** These results suggest that mothers with Wilson's disease can give her breast milks to their babies even when they are continuing the treatment for Wilson's disease.

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