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Therapeutic Effect of Methylphenidate Hydrochloride Combined with Ω-3 Polyunsaturated Fatty Acids for Attention Deficit Hyperactivity Disorder in Children

Xiaolin LIU & Zhiwei ZHU *

Developmental Behavior Department, The Children's Hospital Zhejiang University School of Medicine, Hangzhou 310052, China

SUMMARY. **In this study, the therapeutic effect of methylphenidate hydrochloride combined with ω-3 polyunsaturated fatty acids (ω-3 PUFA) for attention deficit hyperactivity disorder (ADHD) in children was investigated. Sixty-eight children with ADHD were randomly divided into control and observation groups, with 34 cases in each group. Both groups were given integrated training of hearing, vision and feeling. On this basis, the control group was treated with methylphenidate hydrochloride, and the observation group was treated with hydrochloride combined with ω-3 PUFA. The treatment in each group was continued for three months. After treatment, compared with control group, in observation group the Swanson, Nolan and Pelham Rating Scale-IV scores were significantly decreased, respectively ($p < 0.05$), the Wechsler Intelligence Scale for Children-Revised scores were significantly increased, respectively ($p < 0.05$), and the serum prolactin and 25-hydroxyvitamin D levels were significantly increased, respectively ($p < 0.05$). The incidence of adverse reactions had no significant difference between two groups ($p > 0.05$). In conclusion, methylphenidate hydrochloride combined with ω-3 PUFA can effectively improve the symptoms of ADHD in children, and regulate the blood prolactin and 25-hydroxyvitamin D levels.**

RESUMEN. En este estudio se investigó el efecto terapéutico del clorhidrato de metilfenidato combinado con ácidos grasos poliinsaturados ω-3 (PUFA ω-3) para el trastorno por déficit de atención con hiperactividad (TDAH) en niños. Sesenta y ocho niños con TDAH se dividieron aleatoriamente en grupos de control y observación, con 34 casos en cada grupo. Ambos grupos recibieron entrenamiento integrado de audición, visión y tacto. Sobre esta base, el grupo de control se trató con clorhidrato de metilfenidato y el grupo de observación se trató con clorhidrato combinado con ω-3 PUFA. El tratamiento en cada grupo se continuó durante tres meses. Después del tratamiento, en comparación con el grupo de control, en el grupo de observación, las puntuaciones de la escala IV de Swanson, Nolan y Pelham disminuyeron significativamente, respectivamente ($p < 0,05$), las puntuaciones de la escala de inteligencia Wechsler para niños revisada aumentaron significativamente, respectivamente ($p < 0,05$), y los niveles séricos de prolactina y 25-hidroxivitamina D aumentaron significativamente, respectivamente ($p < 0,05$). La incidencia de reacciones adversas no tuvo diferencia significativa entre los dos grupos ($p > 0,05$). En conclusión, el clorhidrato de metilfenidato combinado con ω-3 PUFA puede mejorar eficazmente los síntomas del TDAH en niños y regular los niveles de prolactina y 25-hidroxivitamina D en sangre.

KEY WORDS: ADHD, children, methylphenidate hydrochloride, ω-3 PUFA,

* Author to whom correspondence should be addressed. *E-mail:* zhuzhiweihz@163.com

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