OXIMETOLONA
Estimulador da hematopoese na anemia aplástica

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DESCRIÇÃO

Oximetolona (17β-hidroxi-2-hidroximetileno-17α-metil-3-androstanona) é um esteroide sintético derivado da testosterona com propriedades anabólicas e androgênicas.

MECANISMO DE AÇÃO

A Oximetolona estimula a proliferação de células tronco e progenitoras hematopoiéticas, promovendo assim a recuperação das células sanguíneas totais.

INDICAÇÕES

- Anabolizante;
- Deficiência na produção de eritrócitos e outros componentes sanguíneos (anemia aplástica).

DOSE USUAL

Recomendação oral de 50mg ao dia.

SUGESTÕES DE FÓRMULAS

<table>
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<tr>
<th>Oximetolona</th>
<th>Quatrefolic®</th>
<th>Vitamina B12</th>
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<tr>
<td>50mg</td>
<td>150mcg</td>
<td>500mcg</td>
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**Modo de uso:** 1 dose, 1 vez ao dia. **Indicação:** anemia aplástica.

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PRINCIPAIS REFERÊNCIAS


The efficacy of oxymetholone in combination with erythropoietin on hematologic parameters and muscle mass in CAPD patients.

OBJECTIVES: To determine the efficacy of oxymetholone, an androgenic steroid, in combination with rHuEPO on hematologic and muscle mass in CAPD patients. METHODS: A double-blinded, placebo-controlled experimental study was conducted for 6 months and 24 CAPD patients were divided into two groups. The treatment group (n = 11) received rHuEPO plus oral oxymetholone (50 mg/tablet twice daily). The placebo group (n = 13) received rHuEPO plus a placebo twice daily. The evolution of the patients’ hematologic parameters and the impact of the drugs on their muscle mass were evaluated. RESULTS: After 6 months of therapy, hematocrit and hemoglobin values of the treatment group were significantly different from those of the placebo group (38.1 ± 1.0% and 32.8 ± 0.9%, p = 0.001; 12.9 ± 0.3 g/dl and 11.0 ± 0.3 g/dl, p = 0.001 for hematocrit and hemoglobin, respectively). The increase in hematocrit and hemoglobin values observed in treatment group was statistically greater than those of the placebo group (p < 0.01). After 6 months, none of anthropometric parameters, albumin, protein or lean body mass levels, were significantly different from baseline in the placebo group. Conversely, most of the anthropometric parameters, albumin and lean body mass levels were significantly increased in the oxymetholone group (p < 0.05). The mean weight of subjects in the oxymetholone group changed from 63.82 ± 2.71 to 67.02 ± 3.26 kg (p = 0.001). The subjective global assessment score for 7 patients in the treatment group (63.6%) changed in a positive manner. A rise in liver enzymes was the main side effect observed in the treatment group. CONCLUSIONS: Oxymetholone significantly enhances the erythropoietic effects of rHuEPO and improves the nutritional status of CAPD patients. However, significant increases in liver enzymes need to be monitored closely.

Oxymetholone therapy of fanconi anemia suppresses osteopontin transcription and induces hematopoietic stem cell cycling.

Androgens are widely used for treating Fanconi anemia (FA) and other human bone marrow failure syndromes, but their mode of action remains incompletely understood. Aged Fancd2(-/-) mice were used to assess the therapeutic efficacy of oxymetholone (OXM) and its mechanism of action. Eighteen-month-old Fancd2(-/-) mice recapitulated key human FA phenotypes, including reduced bone marrow cellularity, red cell macrocytosis, and peripheral pancytopenia. As in humans, chronic OXM treatment significantly improved these hematological parameters and stimulated the proliferation of hematopoietic stem and progenitor cells. RNA-Seq analysis implicated downregulation of osteopontin as an important potential mechanism for the drug’s action. Consistent with the increased stem cell proliferation, competitive repopulation assays demonstrated that chronic OXM therapy eventually resulted in stem cell exhaustion. These results expand our knowledge of the regulation of hematopoietic stem cell proliferation and have direct clinical implications for the treatment of bone marrow failure.

Androgens for the anaemia of chronic kidney disease in adults.

BACKGROUND: Anaemia occurs when blood contains fewer red blood cells and lower haemoglobin levels than normal, and is a common complication among adults with chronic kidney disease (CKD). Although a number of approaches are applied to correct anaemia in adults with CKD, the use of androgen therapy is controversial. OBJECTIVES: The aim of this review was to determine the benefits and harms of androgens for the treatment of anaemia in adult patients with CKD. SEARCH METHODS: We searched CENTRAL, the Cochrane Renal Group’s Specialised Register, the Chinese Biomedicine Database (CBM), CNKI, VIP and reference lists of articles without language restriction. The most recent search was conducted in August 2014. SELECTION CRITERIA: All randomised controlled trials (RCTs) that assessed the use of androgens for treating anaemia of CKD in adults were eligible for inclusion.
DATA COLLECTION AND ANALYSIS: Two authors independently extracted data and assessed risk of bias in the included studies. Meta-analyses were performed using relative risk (RR) for dichotomous outcomes and mean differences (MD) for continuous outcomes, with 95% confidence intervals (CI). MAIN RESULTS: We included eight studies that reported data from 181 participants. Study quality was assessed as moderate in six studies, one was low quality, and one was high quality. The small number of included studies, and low participant numbers adversely influenced evidence quality overall. We found limited evidence (1 study, 24 participants) to indicate that oxymetholone can increase haemoglobin (Hb) (MD 1.90 g/dL, 95% CI 1.66 to 2.14), haematocrit (HCT) (MD 27.10%, 95% CI 26.49 to 27.71), change in albumin (MD 4.91 g/L, 95% CI 3.69 to 6.13), alanine aminotransferase (ALT) (MD 54.50 U/L, 95% CI 43.94 to 65.06), and aspartate aminotransferase (AST) (MD 47.33 U/L, 95% CI 37.69 to 56.97); and decrease high-density lipoprotein (HDL) (MD -15.66 mg/dL, 95% CI -24.84 to -6.48). We also found that compared with erythropoietin alone, nandrolone decanoate plus erythropoietin may increase HCT (3 studies, 73 participants: MD 2.54%, 95% CI 0.96 to 4.12). Compared with erythropoietin (1 study, 27 participants), limited evidence was found to suggest that nandrolone decanoate can increase plasma total protein (MD 0.40 g/L, 95% CI 0.13 to 0.67), albumin (MD 0.20 g/L, 95% CI 0.01 to 0.39), and transferrin (MD 45.00 mg/dL, 95% CI 12.61 to 77.39) levels. Compared with no therapy (remnant kidney), evidence was found to suggest that nandrolone decanoate can increase Hb (2 studies, 33 participants: MD 1.04 g/dL, 95% CI 0.66 to 1.41) and HCT (1 study, 24 participants: MD 3.70%, 95% CI 0.68 to 6.72). Compared with no therapy (anephric), evidence was found (1 study, 5 participants) to suggest that nandrolone decanoate can increase Hb (MD 1.30 g/dL, 95% CI 0.57 to 2.03), but nandrolone decanoate did not increase HCT (MD 2.00%, 95% CI -0.85 to 4.85). However, oxymetholone was not found to reduce blood urea nitrogen (BUN), serum creatinine (Scr), cholesterol, or triglycerides; or increase plasma total protein, prealbumin, or transferrin. No evidence was found to indicate that nandrolone decanoate increased prealbumin or decreased BUN, Scr, AST, ALT, cholesterol, triglycerides, HDL or low-density lipoprotein (LDL). Adverse events associated with androgen therapy were reported infrequently. AUTHORS’ CONCLUSIONS: We found insufficient evidence to confirm that use of androgens for adults with CKD-related anaemia is beneficial.


BACKGROUND: Oxymetholone (17beta-hydroxy-2-[hydroxymethylene]-17-methyl-5alpha-androstan-3-one) is a 17alpha-alkylated anabolic-androgenic steroid and a synthetic derivative of testosterone. It has been approved by the US Food and Drug Administration for the treatment of anemias caused by deficient red cell production. OBJECTIVES: This review summarizes the pharmacokinetics, current and future clinical applications, and adverse effects of oxymetholone. Relevant studies were identified using a search of MEDLINE through March 2001, supplemented by conference abstracts and presentations. RESULTS: Because of its anabolic properties, oxymetholone has been studied for the treatment of HIV-associated wasting, antithrombin III deficiency, pediatric growth impairment, and damaged myocardium, with varying degrees of success. Hepatotoxicity is a major adverse effect associated with the use of oxymetholone, with cholestatic jaundice the most important hepatic side effect. Less common hepatic side effects associated with the use of anabolic-androgenic steroids include peliosis hepatis and formation of hepatic tumors. All anabolic-androgenic steroids can cause androgenic side effects, including acne, hirsutism, hair loss, clitoral/phallic enlargement, vocal changes, erectile tissue stimulation, gynecomastia, amenorrhea, and changes in libido and sexual potency. CONCLUSIONS: As is the case with many anabolic-androgenic steroids, few pharmacokinetic and tolerability studies were performed before oxymetholone’s approval in the 1960s. It has proved, however, to be an appropriate treatment choice for selected patients with anemia, if carefully monitored.
REFERÊNCIAS


