

Use of Corticosteroids in Rheumatoid Arthritis

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Abstract

Rheumatoid arthritis (RA) is a chronic, systemic inflammatory disorder that may affect many tissues and organs, but principally attacks the joints producing an inflammatory synovitis that often progresses to destruction of the articular cartilage and ankylosis of the joints.

Aim was to evaluate the use of corticosteroids in rheumatoid arthritis. This was a retrospective study, which was carried out in different hospitals.

Method; A total 25 patients with rheumatoid arthritis were studied. These patients either presented in clinics or hospital outdoor department of Jinnah hospital, Sir Ganga Ram hospital and Services hospital Lahore between the period of 12 June 2010 to 30 July 2010.

Results; From the data collected it has been found that Corticosteroids have been widely used for suppressing pain and inflammation in RA.

Conclusion; Corticosteroids can improve the symptoms of patients with rheumatic diseases. They may also have a disease-modifying effect in rheumatoid arthritis. Corticosteroids have a clear role in the management of rheumatic disease. Their toxicity requires that they are used only when necessary, at the lowest dose possible and for the shortest duration of time. Consideration should be paid to the measures that can be taken to limit toxicity.

Keywords: *Rheumatoid arthritis, Corticosteroids, Inflammation*

INTRODUCTION

Rheumatoid arthritis (RA) is a joint disease characterized by inflammation of the joints, stiffness, swelling, enlargement of the cartilage, and pain. Although the cause of rheumatoid arthritis is unknown, autoimmunity plays a pivotal role in its chronicity and progression. It can be a disabling and painful condition, which can lead to substantial loss of functioning and mobility. It is diagnosed chiefly on symptoms and signs, but also with blood tests and X-rays. (1)

The treatment of rheumatoid arthritis has improved dramatically in recent years with the advent of the latest generation of disease-modifying antirheumatic drugs. (2)

Glucocorticosteroids are used frequently in the management of patients with rheumatoid arthritis. Data supporting their efficacy and safety are still meagre. Glucocorticosteroids may be used systemically with different routes of administration (oral, i.m. and i.v.), in different doses and for different periods of time. The effectiveness of glucocorticosteroids in reducing inflammation in the short term has

been shown for oral treatment in a dose of 7.5 mg prednisolone daily or more, for i.m. pulses (120 mg methylprednisolone every 4 weeks) and for i.v. methyl prednisolone pulses. For longer periods of treatment, the evidence suggesting effectiveness of low-dose oral glucocorticosteroids is more limited. Some data suggest that different regimens of glucocorticosteroids may retard the development of erosions in patients with rheumatoid arthritis. The toxicity of short-term treatment is relatively low. For long-term treatment, the development of osteoporosis is a serious problem. (3)

Three important advantages of prednisone have become established, namely, a lack of sodium retention, the absence of increased potassium excretion, and the unlikelihood of the production of hypertension during its use. The incidence of duodenal ulcer was found to be no greater than that encountered in the normal population. Remission or improvement can sometimes be obtained with prednisone in patients whose treatment with cortisone or hydrocortisone has been unsatisfactory because

of undesirable effects or diminution in effect. (4)

Corticosteroids can improve the symptoms of patients with rheumatic diseases. They may also have a disease-modifying effect in rheumatoid arthritis, but they are not first-line treatment. Adverse effects are related to the dose and duration of treatment. Patients taking long-term treatment should be advised of these and prescribed the lowest effective dose. They should not stop treatment abruptly. (5)

MATERIALS AND METHODS

Twenty-five patients with complaints of rheumatoid arthritis either presented in clinics or hospital outdoor department of Jinnah hospital, Sir Ganga Ram hospital and Services hospital Lahore between the period of 12 June 2010 to 30 July 2010 were studied. After detailed medical history of patient and thorough clinical examination, symptoms and signs, but also with blood tests (especially a test called rheumatoid factor) and X-rays were carried out.

RESULTS

Twenty-five patients taking corticosteroids for treatment of rheumatoid arthritis were studied.

Figure 1 shows that commonly prescribed corticosteroid was prednisolone 68% , 16% Methyl prednisolone, 8% dexamethasone, 4% triamcilone and 4% hydrocortisone.

Figure 2 reveals that route of administration is 80% orally, I/V 12% and I/R 8%

Figure 3 reveals that frequency of female patients is 64% while male patients is 36%

Figure 4 shows that 68% patients were RA +ve while 32% patients were RA - ve.

Figure 5 reveals that out of 25 patients 88% patients showed clinical deformity while 12% patients showed no clinical deformity.

Figure 6 shows 96% patients with joint stiffness & swelling and 4% patients with no joint stiffness & swelling.

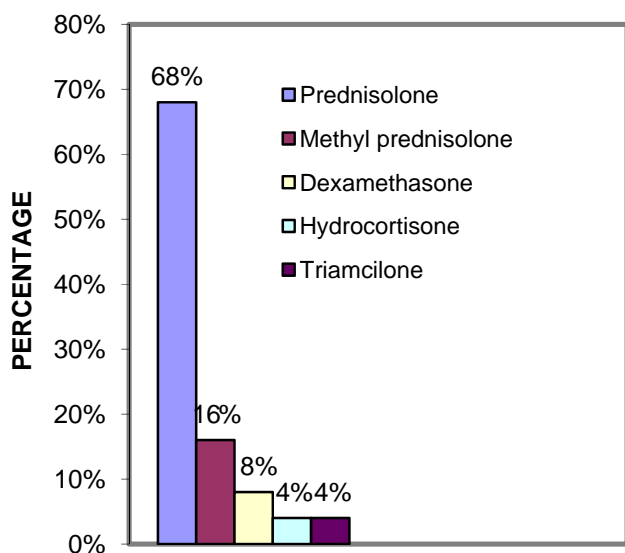


Fig. 1 Commonly prescribed corticosteroids

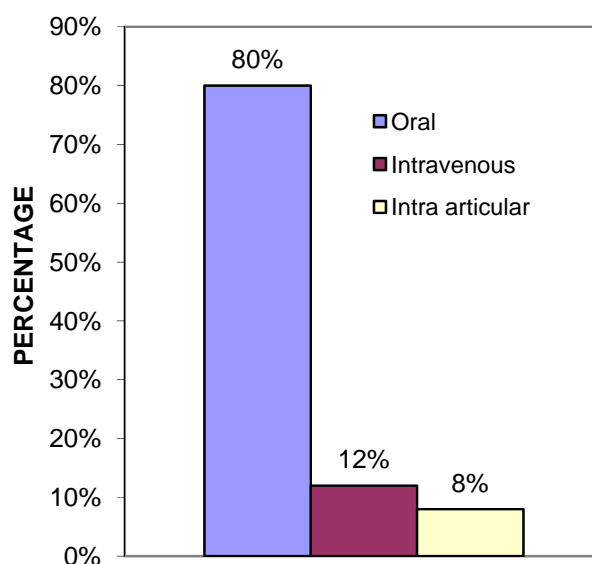


Fig. 2 Route of administration

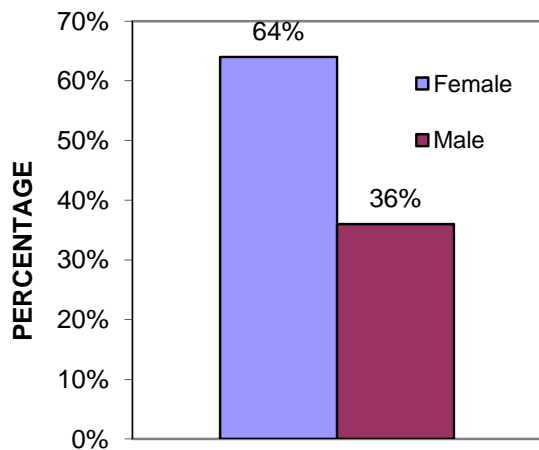


Fig. 3 Frequency of female and male patients

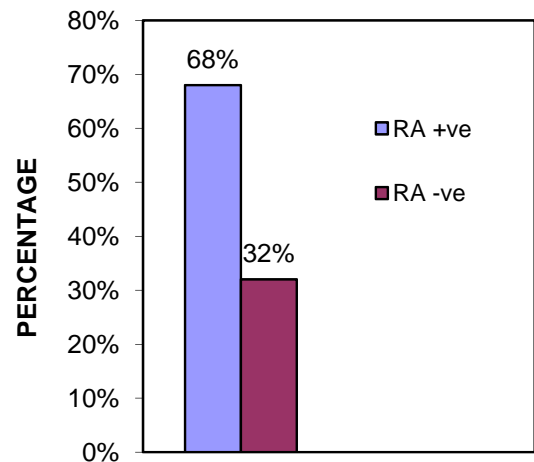


Fig. 4 Percentage of RA +ve & -ve patients

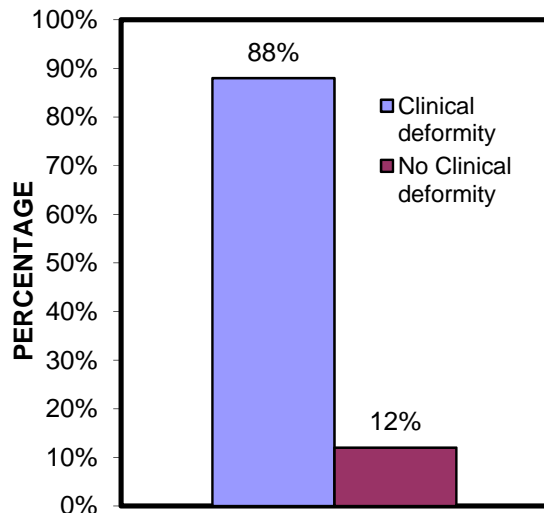


Fig.5 Percentage of patients with clinical deformity

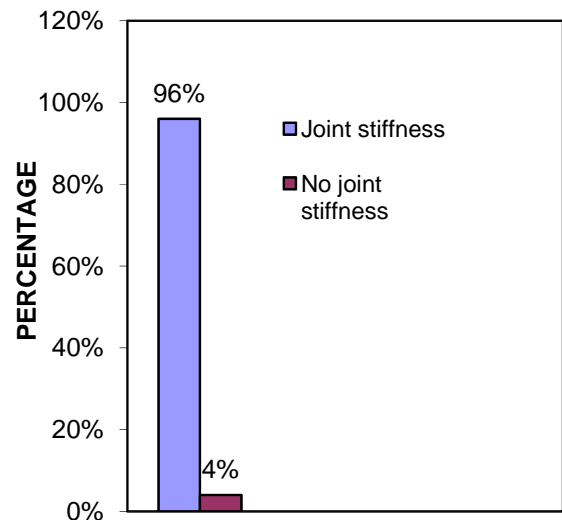


Fig.6 Patients with joint stiffness & swelling

DISCUSSION

During the practical work at different hospitals and clinics, we took case histories of 25 patients and our aim was to access the use of corticosteroids in rheumatoid arthritis patients. Rheumatoid arthritis is a lifelong illness. Combinations of corticosteroids and the new biologic agents can lead to remission in 30 to 40 percent of patients with rheumatoid arthritis, but for most patients , significant disease persists despite treatment.

Women suffer from it 2 to 3 times more than men. Relatives of people with rheumatoid arthritis have an increased risk of developing the disease.

Corticosteroids are dramatically effective drugs for reducing inflammation any where in the body. Corticosteroids can improve the symptoms of patients with rheumatic diseases. Low doses of corticosteroids effectively and rapidly suppress signs and symptoms of inflammation in rheumatoid arthritis, but

adverse effects limit their role. But the beneficial effects of low dose corticosteroids seem to outweigh their adverse effects.

They may also have a disease modifying effect in rheumatoid arthritis. Adverse effects are related to the dose and duration of treatment. Patients taking long term treatment should be prescribed the lowest effective dose. They should not stop treatment abruptly.

To avoid these problems with withdrawal of corticosteroids, the dose should be reduced gradually. Corticosteroids can be given orally, intravenously, intramuscularly, or can be injected directly into the joints. The usual prescribed dose is 5 -10mg daily, although prednisolone can be started at higher doses(15 - 20mg daily), attempts should be made to taper the dose over a few weeks to less than 10mg daily. Some patients are very sensitive to the tapering of prednisolone which is generally done slowly over a few weeks.

The long term use of corticosteroids , particularly at higher doses and particularly when given intravenously or by mouth, invariably leads to many side effects, involving almost every organ in the body. Common side effects include thinning of the skin, high blood pressure, elevated blood sugar levels, poor wound healing, loss of calcium from the bones (which can lead to osteoporosis) , hunger, stomach bleeding, weight gain , and mental problem.

CONCLUSION

In the recent years, therapeutic approaches of patients with rheumatoid arthritis aimed more early phases of the disease in order to reduce or prevent joint damage. In daily practices corticosteroids are widely used in combination with DMARDs to diminish disease activity and to relieve symptoms. Because of the adverse effects and side effects courses with corticosteroid therapy are generally short with the lowest possible doses. Most commonly prescribed corticosteroid is prednisolone. Because corticosteroids reduce the body's ability to fight infections by suppressing inflammation, they are used with extreme care when infections are present.

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Corticosteroids have a clear role in the management of rheumatic disease. Their toxicity requires that they are used only when necessary, at the lowest dose possible and for the shortest duration of time. Consideration should be paid to the measures that can be taken to limit toxicity. No compound has yet been developed that dissociates the anti-inflammatory properties of corticosteroids from their adverse effects.

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