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Potent Anti-inflammatory action of Prednesolone (a corticosteroid) in Rheumatoid Arthritis-A case study II

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Abstract :

Rheumatoid arthritis is an autoimmune disease commonly known as 'Gathiya Vaat' in Indian perspective. Morning joints pain and stiffness along with inflammation are some common symptoms. Consistency of condition may lead deformity in affected wrist & fingers. No specific drug has been still evaluated except the use of some DMARDs along with some corticosteroids. This paper deals how methyl prednesolone has an advantage over 'deflazacort' in the treatment of Rh.arthritis.

Keywords : Rh.arthritis, Autoimmune disease, DMARDs.

Apart from 'osteoarthritis' life became so miserable due to another sort of arthritis called Rh.arthritis. It is an autoimmune disorder1 which is indicated by the persistent of joints pain and stiffness in the morning time. Exact cause of disease is still unknown. Our immune system produces 'cytokines' which secret lysosomal enzymes that damage bones soft tissues & cartilage. This enhances pain threshold due to release of prostaglandins. Chronic condition can cause crippling disorder and deformation of affected organs. There is no specific drug to cure it completely. "Methotraxate'2 an anti-cancer and 'Hydroxychloroquine'3 an anti-malarial drugs are the choice of first line of treatment. Leflunomide and Sulphasalazine4 are also in practice. Sometimes low dose of 'Croticosteroids' are also prescribed along with regular treatment to suppress the severe pain. Author has carried out in vivo experimentation using both corticosteroids and found surprising result that methyl prednesolone has an advantage over defalzacort.

Case History:

After confirmation of positive RA test in 2014. Patient received regular treatment under the supervision of rheumatologist. He took 'Methotraxate' initially 10 mg followed by reduction of dose along with folic acid and NSAID (Non-steroidal Anti-inflammatory Drugs) when required for two years. Continuous investigations of SGPT, SGOT and S.Creatinine were carried out to observe any serious complications. In 2017 during winter, patient felt

severe attack of Rh.arthritis with acute pain and inflammation. Again dose of 'Mexate' was increased but "Defza' 6 mg a corticosteroid was prescribed to suppress the triggerness for at least 3 weeks followed by reduction. But no significant recovery was observed. Physicians then replaced 'Defza' by methyl Prednesolone 5 mg'. It is notable that all corticosteroids are advised to take in the morning after breakfast, still patient got no significant relief.

Experimental:

Patient after taking due permission with his rheumatologist, took 'prednesolone' 5 mg at bedtime instead of morning. He observed unexpected disappearance of pain and inflammation even only in 3-4 days. Patient felt similar condition in summer 2020. Again 'prednesolone' was taken as usual at night for only 3-4 days. Again got relief. Investigations were frequently carried out.

Table 1

Investigation report (16-11-2017)

SGOT	SGPT	S. Creatinine	Hb.
50.6 IU/L	73.3 IU/L	1.2 Mg/dl	12.9 Gm/dl

Table 2

Investigation report (16-04-2018)

SGOT	SGPT	S. Creatinine	Hb.
-	35.0 IU/L	0.7 Mg/dl	-

Table 3

Investigation report (28-01-2019)

SGOT	SGPT	S. Creatinine	Hb.
31.9 IU/L	40.3 IU/L	0.65 Mg/dl	14.9 Gm/dl

Table 4

Investigation report (21-07-2020)

SGOT	SGPT	S. Creatinine	Hb.
-	16.9 IU/L	1.1 Mg/dl	12.9 Gm/dl

Observations:

Observations are as follows:

Initially patient recovered on taking DMARDs (Disease modifying Anti-rheumatic drugs) 'Methotrexate' as a first line of treatment at least for two years and recovered.

(I) After sudden relapse of disease in 2017 winter, he took 'Defza' but due to no significant recovery, he was advised to take 'prednesolone' in place of 'Defza'. Patient immediately recovered.

(II) After 3 years in 2020 summer due to relapsing of disease and acute symptoms, once again same therapy of 'prednesolone' especially in night was taken, again gave surprising result even without taking any NSAID/Analgesic.

Conclusion:

Above observations clearly reveal that in case of acute joints pain and inflammation due to Rh.arthritis, it will be a good choice for physician to prescribe 'prednesolone' in the place of 'deflazacort', a corticosteroid even for a short regime along with regular DMARDS. Another important finding is that it is a better way to take it at bed time rather than morning as always prescribed. Finally it is significant that to suppress severe pain there is no need to take any pain killer with magic dose of 'prednesolone'.

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References:

1. Tripathis, K.D. (2013), Essentials of medical pharmacology J.P. Medical Ltd.
2. Tiling L., Townsend, Si and David, J (2006), Methotrexate and hepatic toxicity in Rh. arthritis clinical drug investigation, 26 (2), 55-62.
3. Smolen, J.S. etal EULAR recomm. for management of Rh. arthritis with synthetic and biological DMARDS, Ann Rheum. Dis. 73 492-509 (2014).
4. James Dale etal. 'Combination theraphy for Rh. arthritis: Methotrexate and sulfasalazine together or with other DMARDS. Nat. clin. Pract. Rheumatol 2007.
5. A.H. Ansari, 'use of corticosteroid in Rh. arthritis', Haya Saudi Journal of Life Science, Middle East Publication Vol 2, Issue 9 (2017) Page 356-357.

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