Observational study on intra/periarticular injections in North Jordan

Sirs,

The injection of corticosteroids into articular or peri-articular structures has been used for the treatment of rheumatic diseases for the past 50 years (1). Articular corticosteroid injections were found to be useful in a variety of intra and peri-articular conditions (2). The exact mechanism of action is not entirely clear, but reducing inflammation with other immune functions are implicated (3). In the region of North Jordan, injection therapy has not been regularly applied nor monitored. North Jordan is a rural area that hosts a relatively new Medical School with a four-year-old Rheumatology specialty.

Over a period of 3 years, a total of 552 patients with chronic pain syndromes were referred by general medicine and other clinics. Patients were reassessed, diagnosed and treated at the Rheumatology Clinic. Previous treatment included simple analgesics, NSAIDs and various physiotherapy modalities. Half of the referred patients did not require injection therapy and 72% (199) declined this form of therapy. A total of 117 injections were performed on 77 patients over this period. The technique followed (including for hip injections) was that described by Cyriax (4). The patients were instructed to rest, use cold packs, and consult our out-patient clinic if symptoms increased. In order to assess the degree of improvement, evaluation by a Visual Analogue Scale (0-10) was performed, and the results were documented both prior to and 2 weeks following the injections. Of the total number of treated patients (117), 73% were females and 27% males. The age of the patients ranged between 30-80 years, with the peak frequency of injections in patients between 50 and 60 years old.

The mean VAS (0-10) score for pain in patients receiving local injections prior to treatment was 7.8 ± 0.3 and 1.6 ± 0.6 two weeks following injection (Fig. 1). Furthermore, the difference in the mean VAS before and after injection proved to be statistically significant for each separate condition and for the range of conditions with a p value <0.01. The figure also illustrates the various conditions treated in their order of frequency. Three patients dropped out during the follow-up, and were not included in the statistical analysis.

Knee osteoarthritis (OA) was the commonest condition requiring corticosteroid injection therapy, approximately one-third of the cases. Other conditions were moderate to mild entrapment syndromes, shoulder problems, and soft tissue inflammation. The indications for IA and PA corticosteroid therapy in the region of North Jordan are similar to others in the medical literature (5).

The American College of Rheumatology has recommended the use of injections in the treatment of osteoarthritis when there is evidence of effusion and local signs of inflammation (6). Hyaluronate is a new effective therapy that has been so far restricted to the management of knee osteoarthritis and is still not widely available (7).

It is interesting to note that knee OA is a prevalent disease in the region, while hip OA is rather uncommon. This is in contrast to the prevalence of the latter disease in most Western countries. Whether obesity plays a role in the increased prevalence of knee OA needs further investigation (8).

Local injections of corticosteroids for the treatment of soft tissue conditions and entrapment syndromes such as collateral knee strain, shoulder conditions and carpal tunnel syndrome, may be beneficial in relieving pain and improving the activities of daily life (2). Furthermore, patients suffering from bursitis have been shown to benefit from local corticosteroid injections, especially when made into the bursa (5). The use of IA corticosteroid is indicated in the treatment of rheumatoid arthritis resistant to systemic therapy, and seems to be particularly beneficial when corticosteroid is combined with methotrexate (5).

The validity of the above mentioned indications for local corticosteroid injections is further strengthened by the improvement reported in all the recipients, and reflected in the VAS scores. The degree of improvement differs amongst various clinical conditions, but remains statistically significant in all cases. Certainly, the long-term benefit of this therapy is variable depending on the lesion, site, and chronicity (9). It would have been ideal to review patients after a period of 3 to 6 months, but this was impractical.

None of the patients receiving local injections reported any sign of sepsis, inflammation or other complication. The literature indicates that up to 20% of infected joints were usually injected within the previous 3 months (10). There was some reluctance among the natives to accept IA injections as a well-established modality of treatment due to fear, lack of medical knowledge, and past misconceptions; indeed, a few had baseless fear that their condition would deteriorate. Although the patient number was small compared with Western studies, this study is an achievement in terms of previously uncharted territory.

A. ASKARI, *MSc, MRCP*
K.A.N. CHAHINE, *Bsc*

School of Medicine, Jordan University of Science and Technology, Irbid, Jordan.
Please address correspondence to:
Dr. Ayman Askari, Consultant in Medicine/Rheumatology, Jordan Hospital, P.O. Box 922199, Amman 11192, Jordan.
E-mail: drayman101@hotmail.com

References

1. HOLLANDER JL, BROWN EM, JESSAR RA, BROWN CY: Hydrocortisone and cortisone injection into arthritic joints:Comparative effects of and use of hydrocortisone as a local antiarthritic agent. *JAMA* 1951; 147:1629-35.
2. OSTERGAARD M, HALBERG P: Intra-articular glucocorticoid injection in joint disease. *Ugeskr Laeger* 1999; 161: 582-6.
3. STEER JH, MA DT, DUSCI L, *et al.*: Altered leukocyte trafficking and suppressed tumor necrosis factor alpha release from peripheral blood monocyte after intra-articular glucocorticosteroid treatment. *Ann Rheum Dis* 1998; 57: 732-7.
4. CYRIAX JH, CYRIAX PJ: *Cyriax's Illustrated Manual of Othopaedic Medicine*. 2nd ed.,

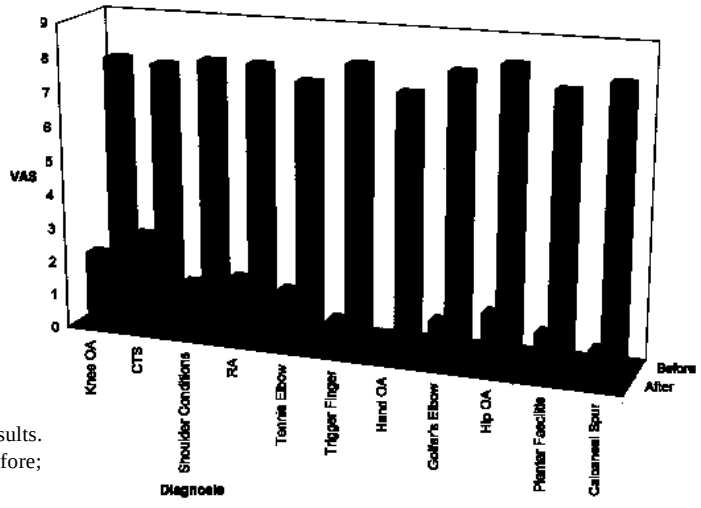

Fig. 1. VAS results. Front row: before; back row: after.

Butterworth Heinemann, 1998.
5. HOCHBERG MC, ALTMAN RD, BRANDT KD, *et al*.: Guidelines for the medical management of osteoarthritis. Part II. Osteoarthritis of the knee. *Arthritis Rheum* 1995; 38: 1541-6.
6. LANE NE, THOMPSON JM: Management of osteoarthritis in the primary-care setting: an evidence-based approach to treatment. *Am J Med* 1997; 103: 25S-30S.
7. HUSKINSON EC, DONNELLY S: Hyaluronic acid in the treatment of osteoarthritis of the knee. *Rheumatology* 1999; 38: 602-7.
8. DAVIS MA, ETTINGER WH, NENHAUS JM: Obesity and osteoarthritis of the knee. Evidence from the National Health and nutrition examination survey (NHANESI). *Semin Arthritis Rheum* 1990; 20 (Suppl.): 34-41.
9. IKE RW: Therapeutic injections of joints and soft tissues. *In:* KLIPPEL JH (Ed.): *Primer of the Rheumatic Diseases*, 11th ed., 1997; 419.
10. VON ESSEN R, SAVOLAINEN HA: Bacterial infection following intra-articular injection. *Scand J Rheumatol* 1989; 18: 7-12.

Juvenile dermatomyositis: Medical and psychosocial team approach

Sirs,

In its extreme manifestation, juvenile dermatomyositis (JDM) may involve the loss of muscle function sometimes to the degree of total disability, with a need for assistance in everyday life (1,2). The patient and his family need to adjust to the chronic nature of the disease, various therapies, and changes in the equilibrium of the entire family.

The patient we describe is unique in having experienced three major catastrophic life events in a short period of time, which he and his immediate family had to overcome. He was an 8-year-old boy, previously healthy, and a talented soccer player who was admitted to our pediatric ward with fatigue, muscle weakness and skin rash. Ten months earlier his grandmother, with whom he had a daily close relationship, passed away due to cancer following prolonged hospitalization at our hospital. At the end of the week of mourning his father unexpectedly vanished, departing to another country because of severe financial complications and threats to his life. About 4 months before his admission our patient developed rash and weakness. Gradually he discontinued his soccer playing, social activities and later refused to go to school. The family thought the child was malingering as a response to the traumatic life events that he had to confront.

Upon examination the patient was bedridden. The clinical diagnosis of JDM was supported by EMG, MRI, US and muscle biopsy. Considering the advanced stage of his illness, the prolonged course until diagnosis, and his depressed mood, we decided on aggressive management - a combination of corticosteroids, methotrexate, immunoglobulins, an intensive physiotherapy program,and daily supportive talks. To encourage him and boost his spirits, we managed to arrange for the number one soccer star in the country to pay him an encouraging visit. The boy gradually regained his previous physical abilities. In a follow-up of 2 years he has resumed normal muscle strength and is off medications.

The psychiatrist diagnosed that the patient was suffering from two major interacting problems. The more obvious one was the physical diagnosis of JDM with its accompanying pain, weakness,and loss of mobility, which rendered him bedridden. This physical blow was superimposed on the pre-existing acute grief reaction due to the loss of his grandmother, to whom he was attached, and the loss and betrayal of the father. The accumulated effect of these frightening catastrophic events brought about a reaction that may be likened to a post-traumatic stress disorder. The observable symptoms and signs were loss of interest and severe social withdrawal, low threshold to social stimuli, and frequent outbursts of anger, listlessness,sleep disturbances, and marked regression.

We perceived the complexity of the patient's emotional reaction from the start and responded accordingly. While considerable attention and empathy were provided, we insisted on reciprocity and active participation. The road to making real emotional contact was through his hobby - soccer, discussion regarding the sport, and physical therapy fitted to soccer-related themes. The idea to bring in the national super-star soccer player to his bedside was a turning point in the course of his hospitalization. From the boy's point of view there was a sense of meaning and even of pride replacing the shame, fear and bewilderment that he had experienced before.

Our case highlights the importance of a cooperative team approach in treating the patient, not only his body but also his soul. Both are related; emotional stress may lead to or enhance and aggravate a chronic disease (3,4). Stress has also been suggested to be a predisposing factor in polymyositis dermatomyositis (5).

The coping-adjusting skills of the patient and his family are key factors in the treatment and control of the disease (ó). Hence, a multidisciplinary team approach and psychosocial interventions are crucial and in this case proved to be an integral part of the treatment (7, 8).

Y. UZIEL, *MD, MSc, Lecturer*
D. NEMET, *MD, Instructor*
E. MAIMON, *BSW, Social Worker*
J. SHALEV, *MA ATR, Art Therapist*
S. HARRIS, *Physiotherapist*
I. KUTZ, *MD, Head, Psychiatry Unit*
B. WOLACH, *MD, Head, Prof. of Pediatrics*
Department of Pediatrics, Sapir Medical Center, Kfar Saba; Tel-Aviv University Sackler School of Medicine, Tel-Aviv, Israel.
Address correspondence to: Dr. Y. Uziel, Pediatric Rheumatology, Sapir Medical Center, 44281 Kfar Saba, Israel.
E-mail: uziely@inter.net.il

References

1. PACHMAN LM: An update on juvenile dermatomyositis *Curr Opin Rheumatol* 1995; 7:437-41.
2. HARTLEY B, CAMPION-FULLER C: Juvenile dermatomyositis: a Roy nursing perspective. *J Pediatr Nurs* 1994; 9: 175-82.
3. CUTOLO M, PRETE C, WALKER J: Is stress a factor in the pathogenesis of autoimmune rheumatic diseases? *Clin Exp Rheumatol* 999; 117: 515-8.
4. LIVINGSTON IL: Stress and health dysfunctions: The importance of health education. *Stress Med* 1988 ; 4: 155 -61.
5. LYON MG, BLOCH DA, HOLLAK B, FRIES JF: Predisposing factors in polymyositis-dermatomyositis: Results of a nationwide survey. *J Rheumatol* 1989; 16: 1218-24.
6. WALLANDER JL, VARNI JW: Effects of pediatric chronic physical disorders on child and family adjustment. *J Child Psychol Psychiatry* 1998; 39: 29-46.
7. BAUMAN LJ, DROTAR D, LEVENTHAL JM, PERRIN EC, PLESS IB: A review of psychological interventions for children with chronic health conditions. *Pediatrics* 1997; 100: 244-51.
8. WOLACH B: Total care in the management of children with chronic hematological disorders. *Harefuah* 1985; 103: 577-80.

MRI diagnosis and successful treatment of upper cervical spine synovitis in a patient with juvenile chronic arthritis

Sirs,

Cervical spine involvement in juvenile chronic arthritis (JCA) may lead to typical permanent changes, which may cause disabilities and increase the risk of complications for the rest of the patient's life (1-5). Early diagnosis and active treatment of the inflammation may be preventive, which was demonstrated here in the patient's history.

A 2 1/2 year old girl came to our hospital because of arthritis in her right knee lasting for two months. ESR was 50 mm/h and CRP 30 mg/l. JCA (antinuclear antibody positive) was diagnosed. Local triamchi-