Clin Rheumatol (1999) 18:264–265

Clinical Rheumatology

Short Communication

Perceived Risks of Joint Infection Following Intra-articular Corticosteroid Injections: A Survey of Rheumatologists

B. Pal and J. Morris

Department of Rheumatology, South Manchester University Hospitals NHS Trust, Withington Hospital, Manchester, UK

Abstract: There are no clear published data on the risks of bacterial arthritis following intra-articular corticosteroid injections. Forty rheumatologists were given a detailed questionnaire; 32 (response 80%) completed questionnaires were analysed. On the basis of recalled cases of post-injection joint infection we estimate this risk to be low, at 4.6/100 000 injections.

Keywords: Corticosteroids; Infection; Injection; Intra-articular; Risk

Introduction

Soft-tissue and intra-articular corticosteroid injections (IA-CI) are common, everyday procedure in rheumatology practice. Synovial fluid (SF) aspirated at the time of these procedures are traditionally sent for culture even when sepsis is not suspected. We reported recently that such routine SF cultures are not necessary [1]. However, clinicians may feel more secure in the knowledge that if SF has been sent for culture, any litiginous action in the future, in case of post-injection infection of a joint, will provide them with a secure defence. This supposition may be valid only if the SF sample sent (before injecting the joint with corticosteroids) had actually shown positive bacterial growth. As we and others have demonstrated, SF sent in the routine manner, i.e. when infection is not suspected, hardly ever grows any microorganism [1,2].

Correspondence and offprint requests to: Dr B. Pal, Consultant Rheumatologist, Room 17, Pavilion 10, Withington Hospital, Nell Lane, West Didsbury, Manchester, M20 2LR, UK.

Aim

As there appears to be continuing anxieties regarding post-injection sepsis in the injected joint and as there are no clear published data on this, we wished to know rheumatologists' perceived risks following these procedures.

Methods and Results

A questionnaire survey was undertaken of rheumatologists attending a conference. The response rate was 80% (32 out of 40). The rheumatologists had been in practice for an average of 14 years. The median number of IA-CI was 10 per month (range 2–50). Some rheumatologists (22%) sent every aspirated SF sample for culture; the rest sent SF only on clinical grounds or when the SF is unduly turbid. Most rheumatologists (n = 22; 69%) did not recall any cases of post-injection bacterial infection, five (16%) recalled one case and the rest (n = 5; 16%) recalled two or more such cases.

Comments

On the basis of the number (n = 389980) of IA-CI performed by these 32 rheumatologists during their practising life and recalled cases of post-injection infection (n = 18), this complication, we estimated, apparently would occur only 4.6 times per 100 000 injections. Thus post-injection bacterial infection is likely to be a rare phenomenon. Many rheumatologists still send SF for routine culture even in the absence of any suspicion of infection in a joint, because of fear of litigation. As suggested by our previous report [1] and as

shown by this survey, such fear is unfounded and routine SF culture may be an unnecessary luxury, costing thousands of pounds every year to the NHS. Our observations have more recently been supported by other authors performing a similar study to ours [2].

It is noteworthy that, although over one in five of practising rheumatologists surveyed indicated that they sent every aspirated SF sample for culture (irrespective of suspicion of infection), none would usually withhold injecting the joint in question with corticosteroids or wait until the SF culture report became available. We see no logic in this manner of practice. It would be far more important to keep in mind the remote possibility of post-injection infection in a joint and warn the patient accordingly to report back as necessary.

To put all this in some perspective, a recent publication would be of interest to the readers [3]. This study estimated the incidence of bacterial arthritis at 5.7 per 100 000 inhabitants per year – somewhat higher than in previous years [4,5]. This higher incidence is explained by increasing joint prosthetic surgery and the occurrence of infection in such joints, especially over the last decade. In this report, pre-existing arthritis (mostly rheumatoid arthritis) was present in only 28 out of 186 patients. In only three patients was intra-articular injection thought to be a predisposing factor for the subsequent infection of the joint.

In conclusion, although hard data are rare, our findings suggest that the worry of post IA-CI bacterial arthritis in routine rheumatological practice is unfounded, and provided that optimum aseptic techniques are followed, this complication is rare. However, there should be no complacency regarding post-injection advice and surveillance of patients so treated.

Acknowledgements. I wish to thank Miss Alison Webb for typing the manuscript.

References

1. Pal B, Nash J, Oppenheim B, Maxwell S, et al. Is routine synovial fluid culture necessary? Lessons and recommendations from an audit. Br J Rheumatol 1997;36:1116–7.
2. Gupta M, Kelly B, Gemmell C, Sturrock RD. Can routine culture of synovial fluid be justified? Br J Rehumatol 1997;36:(suppl 2):abstr 63.
3. Kaandorp CJE, Dinant HJ, van de Laar MAFJ, et al. Incidence and sources of native and prosthetic joint infection: a community based prospective survey. Ann Rheum Disease 1997;56:470–5.
4. Kaandorp CJE, Krijnen P, Bernelotmoens HJ, Habbema JDF, et al. The outcome of bacterial arthritis: a prospective community based study. Arthritis Rheum 1997;40:884–92.
5. Mikhail IS, Alarcon GS. Non-genococcal bacterial arthritis. Rheum Dis Clin N Am 1993;19:311–31.